

THE BLUE RIBBON SOUNDWORKS, LTD.



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A SPECIAL LETTER TO OUR CUSTOMERS





A SPECIAL LETTER TO OUR CUSTOMERS

Dear Valued *SuperJAM!* User,

SuperJAM! is NOT copy-protected. Although we realize that this makes our company vulnerable to piracy, we made the choice not to punish the honest people with inconvenience.

Remember, though, that to us, *SuperJAM!* itself is a piece of music - one that took hour upon hour to make.

Please support our effort by discouraging piracy and thinking twice before you copy this program and give it to a friend.

We want to be around to serve you for a long time. And for that to happen, we need your support and respect.

Sincerely,



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INTRODUCTION

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About Blue Ribbon

Everyone at The Blue Ribbon SoundWorks is dedicated to producing the highest quality software in the industry.

We have invested thousands of hours of research and development in our products. Much of that time is spent in listening to and learning from people like you.

Whether from the novice or the serious professional, we carefully weigh all comments and suggestions, practical as well as theoretical, as each product takes shape.

Blue Ribbon products are designed to be affordable, on-going investments rather than one-time purchases. Our products are not only improved over time, but expandable; thus we have created a long-term usage curve that yields ever-increasing fun and productivity.

The essence of our simple philosophy will be evident in the first few moments that you load up *SuperJAM!* We hope you'll find this the most enjoyable and powerful program you've ever owned.

The Law Of Common Sense

For your convenience, we do not copy protect our products. We see no reason to impose such irritating complexities on our customers. We do ask, however, that you refrain from copying any of our programs.

If, out of excitement and a desire to share a discovery with a friend, you are tempted to do so, please take a moment to consider the vast amounts of energy, talent, time, money and other limited resources involved in creating a program like *SuperJAM!*

INTRODUCTION

We ask that you exercise restraint, common sense and courtesy. Treat us and our products as you would want us to treat you if our roles were reversed.

Please remember that in order for you as an owner to continue to receive the benefits of our ongoing efforts, Blue Ribbon must stay in business! You can help by keeping our products from unauthorized reproduction.

Thanks!

Overview

- *SuperJAM!* is a music program for the novice and professional alike.
- *SuperJAM!* provides you with the power to compose songs in a multitude of styles, even if you have never played an instrument or composed a song before.
- *SuperJAM!* uses many of the same handy mouse modes (editing tools) as does Bars&Pipes Professional to speed you to your goal of creating great music with the mouse, as well as with MIDI instruments.
- *SuperJAM!* puts you on the conductor's platform, as you conduct the band with your mouse, or even your computer's keyboard, within seconds after opening the program.
- *SuperJAM!* gives you a 6-piece band and over 30 styles with real-time, on-the-fly control.
- *SuperJAM!* will capture your imagination; it gives you power to create music like the experts, with a fraction of the effort.

A Few Important Terms

SuperJAM! puts sophisticated musical techniques at your fingertips. In order to use *SuperJAM!*'s features fully, you should become acquainted with the following terms and concepts:

INTRODUCTION

- **TEMPO**: that which determines the speed at which your music plays. Faster tempos tend to represent upbeat music, while slower tempos typically represent more somber tunes. (As with any rule however, there are exceptions.)
- **KEY**: that which determines the group of notes which will be played during a piece of music. Each key contains seven member notes. Keys are defined by a root note, the key note, followed by a mathematical formula of steps which determines the member notes. This pattern of steps make a key major or minor in nature. For the most part, minor keys allude to sadder or more serious themes, while major keys evoke a feeling of happiness and lightness.
- **TIMBRE**: that which defines tonal quality of a note. For example, a trumpet's timbre is brassy and bright while a flute's timbre is airy and sweet. Timbres give your music variety and expression. Rock music typically relies on the timbre of guitars, synthesizers and drums to produce its sound, while orchestral music relies on the timbres of woodwind, string, brass and percussive instruments.
- **STYLE**: that which is a method of expressing a musical arrangement. It often is connected with a geographical region, e.g.: reggae or salsa, or an historical period of time, such as baroque or classical music. A song like "Mary Had a Little Lamb" would sound entirely different if played in a funk style as opposed to a ragtime feel. Styles contain complex rules and directions as to how a piece of music should be played. Rhythm, melodic arrangement, density and expression all play a role in making a style what it is.
- **CHORD**: that which is formed by the simultaneous sounding of various pitches. In other words, when three or more tones play in tandem, they form a chord. Chords provide a musical foundation by determining the "direction" taken by a piece of music.

Tempo, key, timbres, styles and chords come together in *SuperJAM!* to form a piece of music. By changing any one of

INTRODUCTION

these elements, you can change the entire personality of your composition. In pages to come, you'll learn how to customize *SuperJAM!* to your every whim and wish.

The Heart Of The Matter

SuperJAM! is unique in the way it handles music. It is different from a sequencer and other "jukebox" type music programs because it gives you the power to manipulate the actual musical structure.

SuperJAM! is based on controlling the fundamental musical structures (key, chord, style, timbre and tempo). You control this *SuperJAM!* "engine" through a colorful, 3d interface to create and manipulate music like the professionals do.

Controlling and creating music in this way gives new meaning to the concept of "having your own band." So with *SuperJAM!* you don't really have to be a composer. You can direct the band and have them try different chord changes, keys, tempos, timbres and styles.

With *SuperJAM!*, you are the producer!

Special Features

Specifically, many features make *SuperJAM!* a versatile program.

Dynamic Music Design

The most powerful feature of *SuperJAM!* is its ability to vary the style continuously and subtly. With no effort on your part, your music will change, unless you decide to freeze it with the special Snapshot feature. *SuperJAM!* has the uncanny ability to emulate live performance.

One Size Fits All

Much care has been taken to design a powerful program that requires a minimum of expensive hardware. *SuperJAM!*

INTRODUCTION

will run on all Amigas provided they have at least one megabyte of RAM and use WorkBench 1.3 or above.

Music For Everyone

Although *SuperJAM!* has the ability to operate a host of MIDI synthesizers and controllers, Blue Ribbon has not forgotten the Amiga user who doesn't have MIDI equipment.

In fact Blue Ribbon has developed TurboSound Technology, which gives your Amiga the ability to produce more than four simultaneous voices at a time. With an accelerator board and/or extra memory, you can achieve up to **16 simultaneous voices** without the need for any additional hardware.

Just by using *SuperJAM!*, without any additional investment, you will increase the power, flexibility and creative possibilities of your existing hardware.

Superjam! And Bars&Pipes Professional

Another advantage of *SuperJAM!* software is its usefulness with other programs. Anything you create with *SuperJAM!* can be used in Bars&Pipes Professional. This opens a world of possibilities for expansion.

Even if you do not presently own Bars&Pipes Professional, you can incorporate all of your compositions into it at a later date. This unique feature also gives you the ability to use *SuperJAM!* windows directly inside Bars&Pipes Professional.

Staying In Sync

As with Bars&Pipes Professional, you will learn how your *SuperJAM!* creations can be incorporated into any number of programs using AREXX. You can use *SuperJAM!* to synchronize your sound creations with many forms of media presentations, thus extending your power to create multimedia presentations and animation, complete with your own synchronized music tracks.

INTRODUCTION

SuperJAM! supports the same system of synchronization accessories that Bars&Pipes Professional uses, including ARexx, The Phantom (from Dr. T's Music Software) and MIDI Time Code. It also supports special accessories that sync with specific applications being developed.

About The Manual

SuperJAM! is an exciting and powerful tool created for novices and professionals alike. Because it is unique, we have designed this manual with the following priorities:

- To install *SuperJAM!* on your computer quickly
- To begin playing and creating music with *SuperJAM!*
- To take a quick tour of the program
- To learn the many features in more detail
- To learn how *SuperJAM!* works with other programs

Conventions

The following list defines the conventions used in this manual:

- Bold is used for emphasis
- Capitalization is used to distinguish *SuperJAM!* terminology from proper English or other uses of the term
- "Click on" refers to 1 click on the left mouse button
- "Double click" refers to 2 rapid clicks on the left mouse button

INTRODUCTION

- NOTES and TIPS are offset to add to the subject matter at hand without breaking the flow of the body text, **not** to deemphasize them
- Examples illustrate a point with specifics

Let's Go!

In the following chapters, you are going to experience a new way to create music. Even the novice can produce a song that will cause a professional musician to take serious notice.

We urge you to read this manual thoroughly. It is designed to speed you along with our quick tutorial and tours of the program.

Let's get on with the installation.

Chapter 2

Quick Installation

SuperJAM! is easy to install on your Amiga computer. You can install it on a hard disk system, or run it directly from your floppy drive(s).

NOTE → Do not attempt to install SuperJAM! if you are using a pre-release version of Workbench 2.0 (i.e., Workbench 2.03 or lower). Doing so will render the SuperJAM! installation program inoperable.

Hard Disk Installation:

1. Make sure you have at least 3 megs of memory left on your hard disk.
2. Place the *SuperJAM!* program disk in any floppy drive.

NOTE → Do not adjust the write-protect tab on your SuperJAM! disks. Doing so will interfere with the installation process.

3. Double-click on the program disk in Workbench to open the disk window.
4. Double-click on the Hard Disk Install icon. This runs the *SuperJAM!* hard disk installation procedure.
5. Store the *SuperJAM!* disks in a safe place.
6. Run *SuperJAM!* from the *SuperJAM!* directory on your hard disk.

Floppy Disk Installation:

1. Double-click on the Floppy Disk Install icon, then follow the prompts as they appear on the screen.

NOTE → Do not adjust the write-protect tab on your SuperJAM! disks. Doing so will interfere with the installation process.

2. Duplicate each of the *SuperJAM!* release disks. Please consult your computer manual if you have questions.
 3. Store the *SuperJAM!* disks in a safe place.
 4. Run *SuperJAM!* from the duplicate "Program" disk.
-

Chapter 3

A Few Words Of Advice

The following is a hands-on tutorial designed to familiarize you with the ease and power of *SuperJAM!* Chances are that at some point during or after the tutorial, you will be having so much fun that you may forget about the manual.

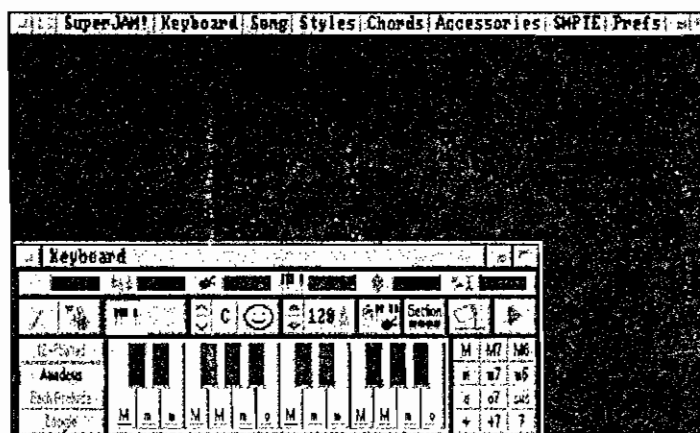
However, if you can restrain yourself, please continue to read the manual after the tutorial. This manual was designed to decrease the learning curve of the program. *SuperJAM!* has hundreds of features and many levels of use. There is far more to *SuperJAM!* than meets the eye. (Or is that ear?)

The Start-Up Screen

With *SuperJAM!* installed, double click on the *SuperJAM!* icon within Workbench. In a few moments (depending upon the speed of your computer) the *SuperJAM!* start-up screen appears. The following items should display on your screen:

- The Mouse Pointer
- The *SuperJAM!* Quick Strip
- The *SuperJAM!* Keyboard window

NOTE → Since this is a hands on tutorial, we assume that you have *SuperJAM!* up and running on your computer.



As in Bars&Pipes Professional, the mouse pointer is a saxophone. The activating tip of the pointer is the mouthpiece.



Mouse Mode Options

In some *SuperJAM!* windows, you can use the mouse to perform various editing operations. Under these circumstances, *SuperJAM!* presents you with a set of mouse mode options. For example, in a Note editor, you might use the Pencil to enter notes or the Eraser to remove them.

When you select a mouse mode by clicking on it, the pointer transforms into the appropriate image.

To return the pointer to its normal saxophone (mouse) mode, click on whatever mode you are using to disable it.

Example:



-
1. Point the tip of the mouse pointer over the Magic Wand (the first button on the left in the Keyboard window) and click on it. It transforms into the Magic Wand.



NOTE → Always use the Magic Wand to change an existing setting. This holds true throughout *SuperJAM!* In general, the Magic Wand always edits or alters the selected item.

2. Point the tip of the Magic Wand over the same button and click again. Presto, the mouse reverts to the saxophone.
-



QUICK TUTORIAL

NOTE → From this point on, any reference to "click on" will mean pointing the pointer on the object indicated in the text and clicking the left mouse button once. "Double clicking," of course, means two clicks in rapid succession.

The Quick Strip

At the top of your screen is a strip of buttons. We will cover these in depth later in the manual. For now, you should know that all of the buttons in this strip open a window except one, the *SuperJAM!* button.



Clicking on the *SuperJAM!* button pulls down a menu with 4 menu operations: New; Load; Save; About; and Quit.

The important thing to remember about this button is that it is global. This means that the operations in this menu apply to every other window in the program (and there are many.)

NOTE → There are similar operations in other menus as you will see (i.e., Load, Save etc.) The difference is that the other menus and their operations apply specifically to the currently active window, not to the entire program.

In order to understand the next section, it will be helpful for you to open another window. So use the Quick Strip now to open the Song window by clicking on the Song button. The Song window appears next to the Keyboard window.

Features Common To All Superjam!

Let's explore the Song window. Many aspects of this window are common to all windows in *SuperJAM!*

Positioned across the top are the Window Close gadget, the Title Bar gadget, the Expansion gadget, and the Window-to-Back and Window-to-Front gadgets. In the bottom right-hand corner is the window sizing gadget.



- Close the window by clicking on the Window Close gadget.

- Drag the window to a new location in the *SuperJAM!* screen, by clicking down on the Title Bar, moving the mouse to the new location, and lifting up on the mouse.

Song

NOTE → The currently selected window displays its name in red in the title bar. Only one window can be active at a time.



- To expand the Song window so that it fills the entire screen, click on the Expansion gadget. Once the window is fully expanded, the Expansion gadget becomes the Contraction gadget. Click on it to return to the original size and position.

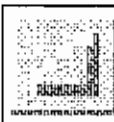


- To push the Song window behind other windows, click on the Window-to-Back gadget.



- To bring the Song window to the forefront, click on the Window-to-Front gadget.

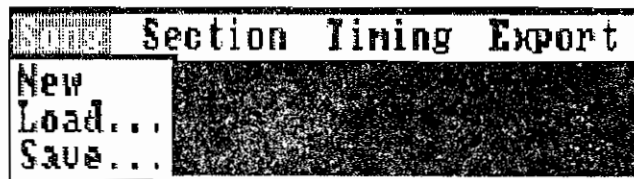
- To resize the Song window, click on the Window Sizing gadget and drag it.



Go ahead and play with the Song window's system gadgets. *SuperJAM!* uses some or all of the above gadgets in every window. When you're done, reposition the Song window in the bottom right-hand corner of the *SuperJAM!* screen.

Using Menus

To activate any window, click on it with the left mouse button, then press and hold the right mouse button. The standard Amiga menu bar appears over the Quick Strip. To open a menu, continue holding down the right mouse button as you slide the mouse pointer over one of the menu titles. A pull-down menu appears.



NOTE → The contents of the menu bar changes for each window that is active. A window is active when you first open it and subsequently every time you click on it. You can tell if the window is active: the title of the window is red. If the window is not active, it's blue.

Example:

1. Now that you have the Song window open (and its title is red,) click and hold the right mouse button. Notice that the menu bar (at the top of the screen) has an item named Song. We refer to this as the Song menu. The operations within that menu apply ONLY to the Song window.
2. Click on the Keyboard window's title bar. The title becomes red. The window is now active.
3. Click and hold the right mouse button. Notice that the menu bar now has an item named Keyboard. We refer to this as the Keyboard menu. The operations within that menu apply only to the active, Keyboard window.

Each window has a different set of options in the menu bar.

Getting Started

In order to avoid confusion in the next part of the tutorial, close any windows that you may have opened, except the Keyboard and the Quick Strip, so that we can stay together.



Attention MIDI Users

By default, *SuperJAM!* assumes you aren't using MIDI equipment and as such, sets you up to play via the TurboSound Technology instruments. If you do have access to MIDI equipment for this tutorial, you'll need to set up specifically for MIDI. Here's how:

Example:

-
1. Click on the Keyboard window to activate it, then select Load... from the Keyboard menu.
 2. Select the *SuperJAM!* volume in the File Requester; then select the "Defaults" directory.
 3. Choose your MIDI synth from the file list. If you don't see yours specifically, choose the closest match. When in doubt, choose "MT-32," since many synthesizers adhere to the Roland MT-32 parameters.
 4. Click on the Load button.
 5. Go back to the Keyboard menu and select Save As Default.
-



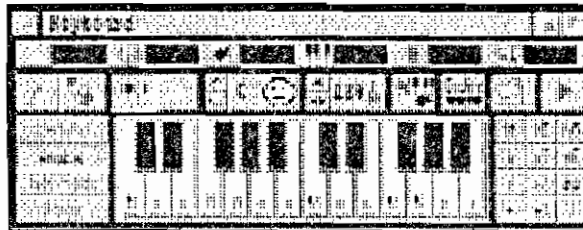
QUICK TUTORIAL

Now that you've installed your MIDI equipment as the Band's default, *SuperJAM!* will initialize itself appropriately every time you run it.

NOTE → If you're unsatisfied with the default setup, you can always change it. All you'll need to do is open the Band window from the Keyboard window, change each player's MIDI patch number, then save again with the Save As Default command. We'll be covering the Band window in the next chapter.

The Keyboard Window

If the Keyboard window is not active, click on its title bar to activate it. (The Keyboard window is activated when you first open the program.)



Immediately to the left of the piano keys are a set of 4 buttons stacked vertically with names on them. Each name represents a Style. *SuperJAM!* provides more than thirty Styles. We will show you how to find the rest later.

NOTE → In the exercise below, you are going to play some music. Make sure that your Synthesizer or Amiga's sound system is properly connected and that the volume on your monitor or speakers is turned up.

Playing A Style



Click on one of the Styles to activate it. The button depresses and turns red.

In the horizontal row of buttons, just above the piano keys, there is a large, blue triangle pointing to the right. It is located last in the row. This is the Play button.

Click on the Play button... Ahh! Instant music!

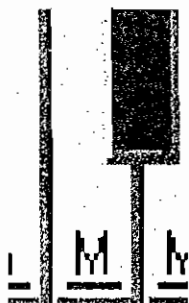
NOTE → Notice that, while playing, the button transforms into a red square, the Stop button. You can stop the playback by again clicking on that button.

Go ahead, play a Style and let it run. Now, click on another Style. You can switch Styles on-the-fly without having to stop first.

Playing Chords

Your *SuperJAM!* Band is playing a Style that you selected, but the music doesn't seem to be going anywhere. The Band knows how to play; they just don't know what to play. It's time to tell them what to do.

Example:



1. Click on one of the piano keys in the Keyboard window marked with a blue or red underscore. On each member key, you'll find the appropriate chord within the currently selected key signature. (These chords are determined by choosing every other note within the key for each root, or starting, note.)

NOTE → *SuperJAM!* uses chord symbols to abbreviate each chord type. (If you are a musician, you will recognize these.) Use the following key as a guide:

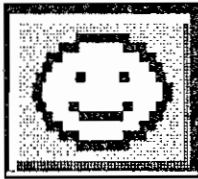
- An uppercase "M" represents a major chord
- A lowercase "m" represents a minor chord
- A plus sign (+) represents an augmented chord
- A degree sign (°) represents a diminished chord
- A seven (7) represents a seventh chord

QUICK TUTORIAL

- Please see the glossary located at the back of this manual for further explanation of these chord types.

NOTE → The underscores indicate the member notes of the key. The red underscore indicates the key, or root, note. In the key of "C," that would be the note "C." The blue underscores in the rest of the piano keys indicate the member notes of the key. When in doubt, always choose a note with an underscore.

2. Click on another piano key. Continue to click on different keys. Notice how effortlessly the music follows the chord changes which you are entering.
3. Click on the Happy/Sad Face button and your music changes to a minor key.
4. Click again on the piano keys and see how different your music sounds in harmonic minor! Notice that several of the chord types have changes to suit the minor key.



NOTE → You can also change chords on-the-fly by using your computer keyboard. While in Chord mode, the first row of letter keys above the space bar on your computer keyboard plays chords based on the white notes and the row above (i.e., asdfg, etc.) plays chords based on the black notes! When in Lead mode (more on that soon,) the bottom two rows of your computer keyboard become single notes, while the top row of numbers plays the chords.

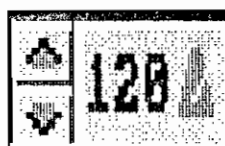


Notice that the Piano button to the left of the Keyboard window is depressed (ON) by default. This indicates that an entire chord will play when you press an individual note on

the piano keys, your Amiga keyboard or your MIDI keyboard.

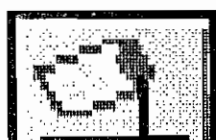
Changing Tempo

Is the Band playing too fast or too slow? You be the judge. Try a different tempo by clicking on the purple arrows just to the left of the Tempo button, the metronome icon (the default is 120.) Each click of the mouse moves the tempo numbers higher or lower by one increment.



- ★ TIP ★ Instead of using the arrow buttons to increase or decrease the tempo, click down and hold on the Tempo Display while dragging the mouse up or down. As you drag upwards, the tempo rapidly increases. As you drag down, the tempo rapidly decreases. You can also click and hold down the mouse on one of the arrow buttons to rapidly scroll up or down the tempo setting.

Adding A Fill



To add a little flair to your performance, do the following:

While your Band is playing, click on the Fill button, the paint bucket icon next to the Play button. At the next appropriate moment, the Band will play a musical embellishment designed to complement the groove.

- NOTE → The button remains depressed until the end of a musical Pattern. At that point, the SuperJAM! Band inserts an Embellishment. After the fill is played, the Fill button raises automatically and is ready to do it again.

Your *SuperJAM!* Band is playing while you throw in chord changes, fills, and new tempos. But there's something missing. Oh, yes, the lead.

Playing A Lead Line

One of the great things about having your own *SuperJAM!* Band is that the Players never get tired, talk back or mutiny. They just keep jammin' while you experiment at your leisure.



Just to the right of the Piano button is the Lead button (a tiny yellow saxophone.) When this is activated, the piano keys play the individual notes instead of complete chords.

Example:

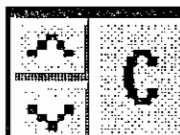
1. Click on the Lead button.
 2. If the Keyboard is playing, stop it.
 3. Click on the piano keys with the mouse or play the two bottom rows of computer keys. Now you should hear individual notes instead of chords.
 4. Click on the Play button to start the Band.
 5. Click again on the piano keys. Now the *SuperJAM!* Band plays backup while you play the lead, or solo, line.
-

★ TIP ★ # You can alternate between playing the melody and changing the chord by using your computer keyboard. Change chords by typing the two top rows of keys. Change lead notes by typing the keys on the bottom two rows.

- ★ TIP ★ #2 If you have a MIDI keyboard hooked up to SuperJAM, it's even easier. Play the chords in the lower octaves and the melody in the upper octaves. To find the split point on your MIDI keyboard, start in the middle and play up or down until you hear chords change to single notes or vice-versa. Although this may seem like a prehistoric method, each configuration will vary from manufacturer to manufacturer.

Changing Keys

Can you play the same song in any key? Even many professional musicians can't. But with *SuperJAM!* you can. Just click on the yellow up or down arrows to the left of the Key Signature button. (It is "C" by default.)



Every click raises or lowers the key change in half step increments and the Style instantly reflects that change. You can even change keys while your Band is playing.

- NOTE → SuperJAM! shows both sharp (#) and flat (b) keys, even though they can sound the same, e.g., D# and Eb are the same pitch, but their key signatures differ.

Notice how the piano keys depress when you choose a different note. The note with a red line on it represents the root note. The capital "M" or lowercase "m" on any key designates whether the chord based on that note is major or minor. The blue underscore marks on the remaining notes indicate the other note members of the key. By default, the chords for each note of a particular key are triads that fall within the key.

If you don't understand the preceding paragraph, don't worry. You're in good hands. Suffice it to say that *SuperJAM!* is designed to make intelligent musical choices for you automatically.

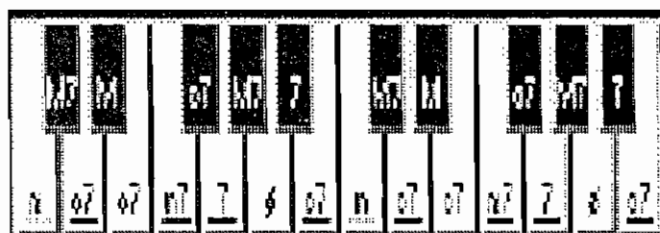
- ★ TIP ★ By selecting the piano keys marked with either a red or blue underscore when making chord changes, you make certain that your musical piece will remain within the designated key.

More Chords

Up until now, the chords you've been playing have been triads within the key. (Triads are chords made of 3 notes, typically formed by using every other note within a selected key.) However, *SuperJAM!*'s Keyboard has options for providing you with a richer palette of chords.

The Keyboard window's Preferences menu provides two options that enhance the variety of chords at your disposal:

- **Create Chords On All Notes:** places chords on all notes of the Keyboard window's piano keys, whether or not they are actually within the key. The chord choices are intelligent; they are designed to sound right if you use them as transitional chords while moving between other chords within the key.
- **Create 7th Chords:** creates 7th chords instead of triads. 7th chords are richer because they are composed of four notes instead of three. (7th chords are typically formed in the same manner as triads, except that you pick every other note for a total of 4 notes, not 3.)



In addition to these automatic selection options, you can also choose your own chords. *SuperJAM!* lets you assign different chord types to every note on the piano.

To the right of the Keyboard window's piano keys is the Chord palette. It displays 12 commonly used chord types. Click on any of the 12 chords to aurally review each one. Watch the Keyboard to learn which notes are played to make up each chord.

If you like the sound of the new chord, you can assign it to any note on the piano keys in the Keyboard window.

Example:

1. While *SuperJAM!* is playing, click and hold on one of the Chord buttons.
 2. Drag a copy of the chord off the selected Chord button and place it over the desired piano key. Then release the mouse button.
-

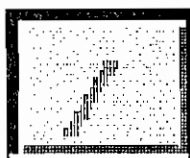
NOTE → You must be in the Chord mode (not Lead mode) to hear the effect.

★ TIP ★ Because the Band may not currently be playing the note to which you assigned a new chord, you can hear it in the musical context of the Style by immediately clicking the piano key onto which you placed the chord.

You may say that the leader of a band should know more than 12 chords. Well, *SuperJAM!* gives you that power if you want it.

Example:

1. While *SuperJAM!* is playing, click on the Magic Wand icon at the very left of the icon bar under the window's title. The mouse pointer is transformed into a Magic Wand.
2. Move the Magic Wand over a piano key or over the Chord palette, then click and hold down the mouse button. In a moment a menu pops up with a long list of chords.



QUICK TUTORIAL

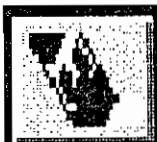
3. Continue holding down the mouse button and move the mouse pointer to the arrow beneath the list. The remainder of chords scroll by.
 4. When you see one that you want to try, move the mouse pointer over the chord until the chord name is highlighted; then release the mouse button.
-

Notice that when you choose a new chord by clicking on one of the piano keys with the Magic Wand, it is automatically assigned to that note. The chord type is automatically written on the piano key for your instant reference. (The same holds true when you select a new chord in the Chord palette.)

But what if you don't like the way your new chord sounds? You can always remove it with the Eraser.

Example:

1. Click on the Eraser (the button next to the Magic Wand containing the letter "E.")



NOTE → The Eraser is always used when removing an item. This holds true throughout SuperJAM.

2. The mouse pointer becomes an inverted Pencil.
 3. Place the Eraser tip over the offending note on the Keyboard and click on it.
 4. Poof! It's gone.
-

NOTE → Make sure when you're done with the Eraser or Magic Wand to turn it back off. Otherwise, the mouse pointer will continue to remove or change every chord you touch!

More Styles

SuperJAM! comes with a lengthy palette of Styles. Many of them are already installed by default, but only 4 are visible in the Keyboard window. So where are the rest?

To find the other installed Styles, you'll just have to work some more magic.

Example:

-
1. Click on the Magic Wand in the Keyboard window.
 2. Use the Magic Wand to click on one of the Style buttons. A pop-up menu containing the complete list of installed Styles appears.



3. Without clicking, move the mouse pointer into the area of the bottom arrow. The list begins to scroll, revealing the remainder of the list.

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4. To stop the scroll, move the mouse pointer back into the grey rectangular area.
5. To select a Style, move the mouse pointer over the list. Notice that as you move the mouse pointer, a Style is highlighted.
6. When the Style that you want is highlighted, click on the mouse. The Style magically appears in the button that you originally clicked on and is ready to play.

You can even change Styles on-the-fly. While one Style is playing, click on another one. *SuperJAM!* instantly plays your new selection.

As we mentioned earlier, not all the Styles that come with *SuperJAM!* are installed when you first run the program. You may wish to load more Styles into *SuperJAM!* than originally load by default. Here's how:

Example:



1. Click on the Styles button in the Quick Strip to open the Styles window. The Styles window displays the list of currently installed Styles and their time signatures.
2. Hold down the right mouse button, go to the Style menu and select Load. The *SuperJAM!* file requester opens.

3. If the file requester does not show the contents of the Styles directory, first find the Styles directory itself, then choose a Style to load by clicking on its name.
4. Double-click on the name of the Style or click on the Load button.
5. *SuperJAM!* loads the new Style and installs it in the Styles window. From now on, this Style will load every time you run *SuperJAM!*.
6. Close the Styles window, return to the Keyboard and select the new Style with the Magic Wand.

NOTE → Each Style takes up memory. If you are running *SuperJAM!* on a computer with only one meg of memory, we recommend against loading in too many Styles. To remove extraneous Styles, use the Remove command located in the Style menu.

Conclusion

Remember, the Styles that *SuperJAM!* provides are only the beginning. You can modify these Styles and/or create new Styles from scratch. (We cover this thoroughly in later chapters.) There is no limit to the number of Styles that you can create and use.

This concludes the "Quick Tutorial." As we have stated earlier, *SuperJAM!* is for the novice as well as the expert. And while most novices will enjoy many hours of entertainment from what has been described in this tutorial,

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the experts will be pleased to know that we have not yet even scratched the surface.

Regardless of your musical aptitude, you will find a wealth of valuable information, suggestions and tips in the remainder of this manual.



Chapter 4

A Whirlwind Experience

SuperJAM! is a powerful compositional tool. It has many layers of depth and levels of use. Playing with the Keyboard window is only the beginning. You can create Instruments (sounds,) Sections and Songs, even build your own Styles.

But before we launch into the finer points of producing and composing in *SuperJAM!*, we would like to familiarize you with all of *SuperJAM!*'s windows by taking a quick tour.

The tour is actually part two of our tutorial, which began in the preceding chapter. We again assume that you have *SuperJAM!* up and running on your computer, so that we can guide you through the windows.

During the tour, you will be looking around, taking in all the sights that *SuperJAM!* has to offer. As you look around, we will be your tour guide, pointing out interesting details. At the same time, we will increase your familiarity with some of *SuperJAM!*'s special terms and concepts.

Those of you that own Bars&Pipes Professional will recognize many of the same mouse modes and icons. Even so, *SuperJAM!* is a unique music program, a completely new way of making music.

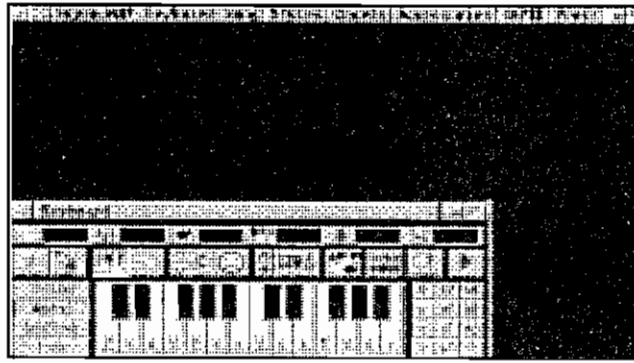
NOTE → If you have not read the previous chapter, please do so now.

In part one of the tutorial, we guided you through the Keyboard window. We will now continue where we left off.

Before We Take Off

In order for us to be in sync, let's start with the Start-up screen. If you have been experimenting and the screen has changed, click and hold on the *SuperJAM!* button in the Quick Strip at the top of your screen. A menu appears beneath your mouse. Select "New." The *SuperJAM!* screen

reverts to its original state, which guarantees that we'll start with the same setup.



The Keyboard Window

The Start-up screen reveals only the Keyboard window and the Quick Strip. Please don't move the Keyboard window, since its placement will become important as you open other windows. We will get to the Quick Strip in just a minute. For now, we will look at two windows accessed from the Keyboard window that we didn't use in the Quick Tutorial.

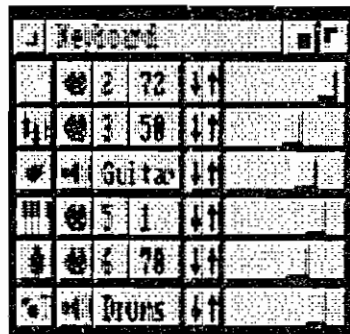
The Band



Click on the Band button, which is located to the left of the Section button. The Band window appears, displaying 6 Player buttons. These buttons represent your Band Members. Each Player performs a specific role within the musical arrangement. The Players are, from the bottom up:

- The Drummer
- The Bass Player
- The Keyboard Player
- The Guitar Player
- The String Section
- The Lead Player

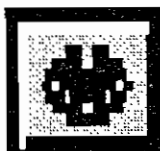
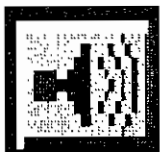
TAKING A TOUR



Notice that the Band window is titled "Keyboard." This means that the Band that you're seeing is associated with the Keyboard window. Later, you will see how you can make your Band Members play different instruments for different Sections within the same Song.

NOTE → The Player names are only a reference to assist you in organizing your work. You can assign any sound/voice to any of the buttons, regardless of its suggested name. For example, the Guitar Player might play a harpsichord, should you so desire.

Choosing Voices



Click on any of the Player buttons. A window appears containing parameters associated with that particular voice. Each button evokes a separate window.

If the button next to the Player is a Speaker, the above operation opens the TurboSample window. If the button next to the Player is a MIDI icon (a black connector,) the above operation opens the MIDI Patch Change window.

The type of window that appears always depends upon whether you are using TurboSound Technology or MIDI as your sound source. (More on that later.)

Selecting Your Sound Source

Just to the right of the Player button is a vertical row of buttons. These are either Speaker or MIDI icons. A Speaker indicates that the Player performs through the Amiga's internal sound circuitry using TurboSound Technology. A MIDI icon indicates that the Player performs through MIDI.

TAKING A TOUR

Each of the buttons in this column is a toggle switch, alternating between TurboSound and MIDI. If the icon resembles a MIDI connector and you'd like it to be TurboSound, click on it once to toggle it to the Speaker icon.

Using TurboSound Technology

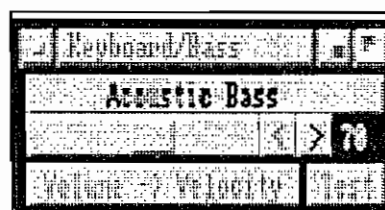
If the MIDI connector icon is displayed in the button, toggle it to the Speaker mode. (See above.) Click on the Player icon to its left. The TurboSound Editor window appears. You can use this window to load, edit, and save your own TurboSound Instruments. Close the window.

To the right of the Speaker icon is the name given to the TurboSound Instrument.

Using MIDI

When you toggle the Speaker, it turns into a MIDI connector icon. Now click on the Player icon to the left of it. The associated MIDI Patch window appears where you may assign a patch name and program change number in order to select a different instrument from your MIDI controller and/or keyboard. Close the window.

To the right of the each MIDI icon are two buttons. Click and hold on the first button and the MIDI Channel Selector appears. To the right of the channel number is the patch, or program change, number that you assigned in the MIDI Patch window.



Editing Octave Range And Volume

Common to both of the above-mentioned sound modes (TurboSound and MIDI) are the remaining buttons and sliders. The arrow buttons raise or lower the octave in which the Player performs, and the sliders control the volume.

TAKING A TOUR

Now, close the Band window and all other windows you may have opened except for the Keyboard window and we will look at one more window accessible from the Keyboard window.



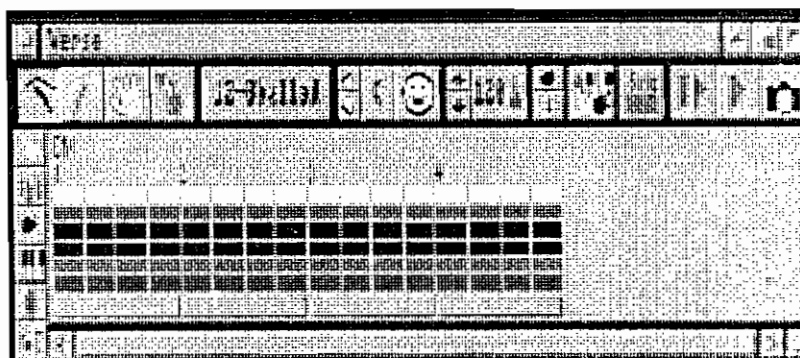
The Section Window

In the Keyboard window, between the Band button and the Fill (paint can) button is the Section button. Click on it to create a new Section. A requester appears asking you to name that Section. Type a name and click on Okay.

After naming the Section, another requester appears asking you to give the Section a length. The default is 8. Choose Okay.

NOTE → The currently selected Style, key and tempo in the Keyboard window are automatically copied into the new Section. You can see the Style name written in the large button between the Eraser and Key Signature buttons.

Once you've chosen your Section length and name, the Section window appears.



The color bars which take up the majority of this window represent each Band Member (vertically) and each beat per measure (horizontally.)

To the left of the Section window, stacked vertically, are the familiar Player buttons. Again, each one represents one of the Instruments that plays during the performance.

The Section window is the arena where you combine key, chords, tempo and Instruments with a Style, just as you did

TAKING A TOUR

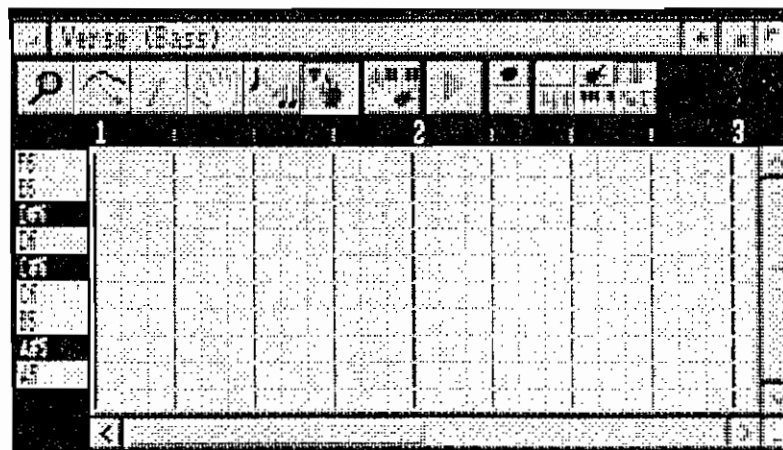
when you played a Style and experimented with the above parameters in the Keyboard window.

NOTE → The difference is that SuperJAM will remember what you do in this window. Once you enter chord changes and other commands into the Section window, SuperJAM follows these commands as it plays the music, until you tell it otherwise.

The Snapshot button is used to capture a musical moment. Once you've taken a Snapshot with the camera, you can view and edit it to your liking. Since the *SuperJAM!* Band gives a unique performance every time, you must take a Snapshot of a Section, if you want that Section to play identically every time.

The Snapshot Grid Window

If you do take a Snapshot of the Section, the music that each Band Member plays during the Section can be viewed and edited in the Snapshot Grid. To see the Snapshot Grid, click on any of the Player buttons on the left side of the Section window. The Snapshot Grid window will appear, showing the Player's performance. (In this case, since you haven't actually taken a Snapshot, the grid will be empty.)



You can create, edit, erase and play the music in this window. (More on this later.)

TAKING A TOUR

Close the Snapshot Grid. If you have opened more than one grid window, close them until you see the Section and Keyboard windows.

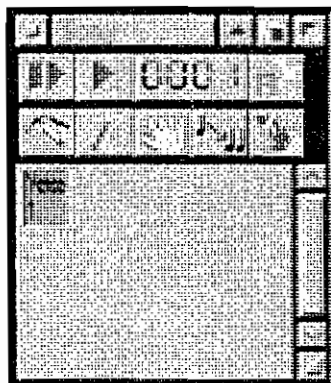
The Song Window



From the Section window, click on the Song button. This button is located fourth from the left side of the window.

NOTE → This button is provided for your convenience. It gives you a clue to your next window; however, you may also open the Song window by clicking on the Song button in the Quick Strip.

The Song window appears.



Notice that there is one Section in the Song window, and it has the name and length that you entered when you first created the Section.

Since a Song is comprised of Sections, the purpose of the Song window is to display the Sections graphically in the order in which they appear.

You will use this window to arrange and perform your final composition.

Close any windows that you may have opened, except the opening screen (Keyboard window and Quick Strip.)

Now you may better understand why we say that *SuperJAM!* is designed for the novice as well as the expert. But we're not finished with the tour. There are many more windows to explore.

The Quick Strip



Examine the Quick Strip at the top of your screen. It overlays the system's standard menu bar. In the Quick Strip you can see 8 selections. They are as follows:

- The *SuperJAM!* button
- The Keyboard button
- The Song button
- The Styles button
- The Chord button
- The Accessories button
- The SMPTE button
- The Preferences button

Let's begin from left to right. To select a window or function, click once on the desired button.

The Superjam! Button

Click and hold on the button named *SuperJAM!* A menu pulls down listing the following:

- New...
- Load...
- Save...
- Quit...

These commands are global in that all associated windows are affected.

NOTE → Although you will find many of the same commands in other windows, they apply specifically to the currently activated window and do not affect the others (i.e., you can save a Section separately and to its own directory.)

The Keyboard

The Keyboard window opens automatically each time you run the program. It remains open until you close it. When you need to open it again, or bring it to the front of a stack of windows, click on the Keyboard button.

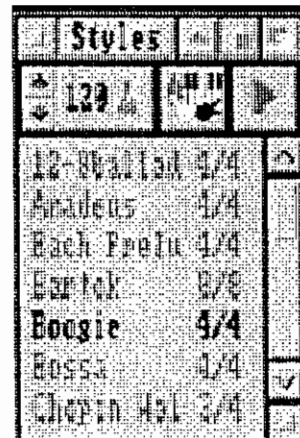
The Song Button

Click on the Song button when you want to open the Song window.

NOTE → The Song window evoked with this button is the same window that appears when you click on the Song button from within the Section window.

The Style Button

Click on the Styles button and the Styles window appears. This window contains a list of the Styles currently loaded. To the right of each Style name is the time signature for that particular Style.



Again, for your convenience, a Play button is provided so that you can hear the Style you are about to examine or edit without having to move to another window.

Select a Style by clicking on it once; then click on the Play button. Notice that the Play button in the Keyboard window also depresses. You may click on chords in the Keyboard window to test the Style.

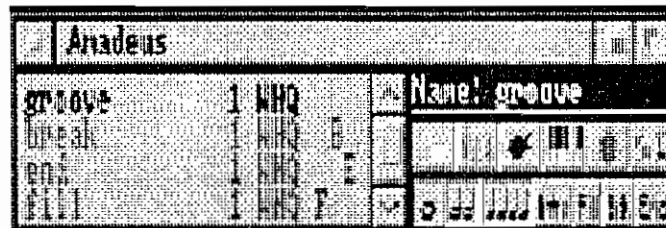
TAKING A TOUR

To play the selected Style to your liking, the Instrument window and Tempo button are also accessible from the Styles window.

The Individual Style Window

Another window associated with the Styles window is the Individual Style window.

Double click on one of the Style names in the Styles window list. The individual Style window appears bearing the name of the chosen Style in the title bar. Use this window to create new Styles and edit existing ones.



In the left half of the of the window is a list of the Patterns that make up the Style.

In the upper right half of the window is the Pattern's name. Under the Pattern's name are the familiar Player buttons, symbolizing the Members of the Band.

Under the Player buttons is a row of Pattern type buttons. You can use these to specify a number of special musical abilities that a Pattern may contain. (More on Patterns later.)

Let's take a look at another window that shows a Pattern played by one of your Band Members. Select a Pattern from the list by clicking on it once. The Pattern name is highlighted.

Once you have chosen a particular Pattern, click on one of the Player buttons located in the individual Style window that you are viewing.

The Pattern Grid Window

Again you see a grid depicting the notes and other parameters that make up the Pattern for that particular

TAKING A TOUR

Player and its associated Instrument. This grid, however, is not the Snapshot grid; it is the Pattern Grid window.



Let's examine this one in more detail. What you are viewing is the foundation of the Style. The colored bars are notes within the measure. (The measures are notated by the numbers that run horizontally, just above the chart proper.) If no notes are visible, drag the scroll bar on the right side of the grid until some are visible.

In the Pattern Grid window, you can:

- Enter a note
- Erase a note
- Move a note
- Duplicate a note
- Look into a note
- Play the Pattern
- Zoom in or out
- Assign different instruments/voices
- Get to the other Pattern windows

In addition, this Grid window has a few special features not found in the Snapshot Grid window. They all pertain to creating musical Patterns within a Style. They are:

- "Purpleizing" notes
- Selecting Variations
- Selecting inversions

- Assigning priorities to each Variation

You will learn in the following chapters how to use these features. But for now, let's look at some more scenery on our tour.



The Magnifying Glass

Use the Magnifying Glass to analyze all 7 parameters comprising each note.

NOTE → The Magnifying Glass is always used to view detailed numerical information about a selected parameter. This holds true throughout SuperJAM

From within the Pattern Grid window, click on the Magnifying Glass button. The Note window opens. The mouse pointer turns into a Magnifying Glass. Move the mouse over the note that you want to examine more closely and click on it. The note turns red and the Note window redraws the following note parameters:

- Time:
- Range:
- Offset:
- Velocity:
- Range:
- Duration:
- Range:

NOTE → If a note is not selected (highlighted in red) when the Magnifying Glass is selected, the Note window will appear, but it will have no values.

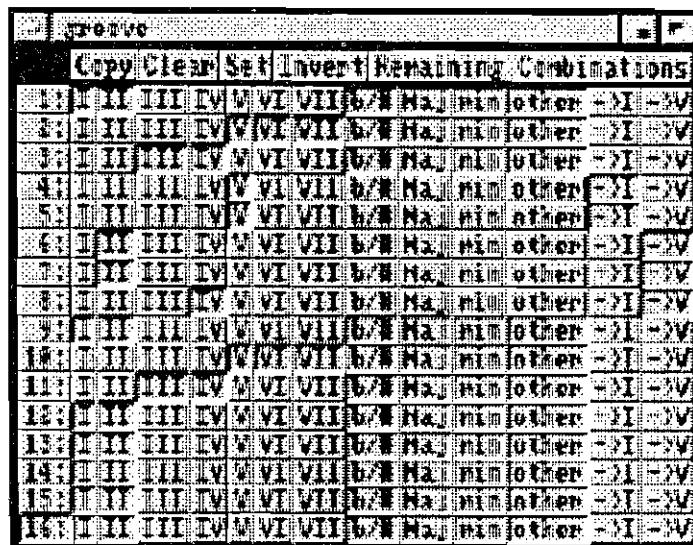
Changing Values In The Note Window

All note parameters listed above can be edited to your specifications by dragging the associated slider bar button or scrolling it with the arrow buttons.

The Variation Choice Window

Within the Pattern Grid window, at the far right of the button bar, there is a Chord button with a question mark inside it. Click on it and the Variation Choice Window appears. (As this is only a tour, we will go into the details of this window later in this manual.)

Look at the title of the window.



It displays the name of the Style's Pattern that you are currently editing. As in the other windows, the title bar of the window reveals its association to another window. This is very important when you begin to customize your screen by arranging the windows. You can open as many windows as memory will allow, resizing and stacking windows to suit your specific needs.

NOTE → SuperJAM remembers where you last placed the windows. Try moving a window to a new location. Now close it and reopen it to see this small but friendly feature.

At this point, if you have been following the tour, you'll have quite a few windows open. If you have been taking a few side trips, there may be even more windows open than those through which we guided you.

So that we don't lose you on this tour, please close all the windows except the opening screen (the Keyboard window and the Quick Strip.)

Some of you may feel that we passed your level of expertise some time ago. Please bear with us. You may not know how to use some of *SuperJAM!*'s host of sophisticated features now, but eventually you may want to learn more.

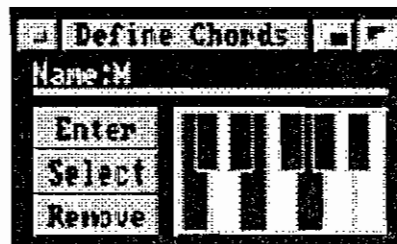
At any rate, it may be interesting for you to know what's "under the hood."

The Chords Button

The 5th button from the left of the Quick Strip is the Chords button. Click on this button. The Define Chords window appears.

The Define Chords Window

If you are an expert musician, the purpose of the Define Chords window will be quite evident. With it, you can create your own custom chords which may be loaded, saved and assigned to any Section in your composition.



NOTE → Although you'll find a similar window in Bars&Pipes Professional, it does not operate in the same fashion.

To define a chord, click on any piano key in this window. Notice that it turns blue. Continue to click on the keys that comprise the chord that you want. Each time you click on a key, *SuperJAM!* plays the chord you've designed so that you can hear its sound.

Each piano key is a toggle switch. After it is selected, click on it again to deselect it.

NOTE → You must create your chord based on the key of "C." In other words, "C" must be the first, or root, note of your chord.

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★ TIP ★ If you'd like to hear how your chord sounds once the SuperJAM Band gets its hands on it, click on the Play button in the Keyboard window, then edit the chord while the Band performs it live!

Just for fun, even if you know nothing about chord structure, click on a few notes. Click the cursor on the name line and type in a name. Now click on the Add button. You have entered your new chord into the list of chords that may be performed by the Keyboard and Section windows. If you feel bold, create and add a few more chords.

To select a pre-existing chord, click and hold on the Select button. *SuperJAM!* provides a list of chords. While holding down the mouse button, slide the pointer over the list. Release the mouse button over the chord of your choice and it appears on the keyboard in the Define Chords window. You may now use it as a template to create your own chord.

Try this: Click and hold on the Select button. *SuperJAM!* again provides a list of chords. While holding down the mouse button, slide the pointer over the bottom arrow in the list. Keep scrolling until you see your chord.

NOTE → This is also a powerful educational tool for those who would like to gain a deeper knowledge of music. You can select chords, analyze them and better understand the "stuff they're made of."

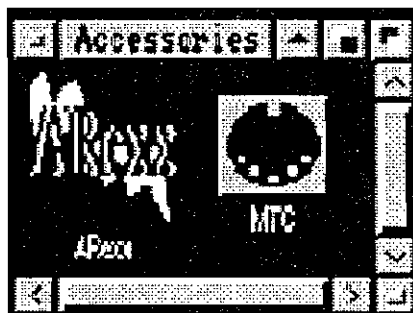
Of course, you can also remove a chord from the list. Do so by first selecting the chord, then clicking on the Remove button.

In later chapters, you will learn how to use your custom chords in a Section. But for now, let's move to another window.

Close the Define Chords window.

The Accessories Window

Click on the Accessories button in the Quick Strip. The Accessories window appears.



Since this feature integrates different Accessories that you may or may not have or want to use, the window is blank.

The Accessories window provides a mechanism for adding new features to *SuperJAM!*. In particular, Accessories may be used to synchronize *SuperJAM!* with other hardware and software products.. *SuperJAM!* comes with a handful of Accessories to synchronize *SuperJAM!* with SMPTE, ARexx, MIDI Time Code, and several Amiga software products.

Once an accessory is loaded into *SuperJAM!*, its icon is displayed in the Accessories window where you may access it.

NOTE → SuperJAM Accessories are a subset of Bars&Pipes Professional Accessories. All SuperJAM Accessories load into Bars&Pipes Professional's Accessories window, and all Bars&Pipes Professional Accessories that handle synchronization with other products load into SuperJAM's Accessories window.

In a later chapter, "*SuperJAM!* and Multi-Media," you will learn how *SuperJAM!* integrates smoothly with other programs via the Accessories mechanism.

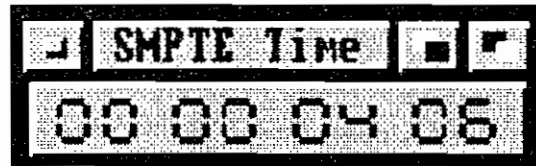
You will also see how *SuperJAM!* can interface with SMPTE and MIDI time code specifications.

Of course, you can run *SuperJAM!* within Bars&Pipes Professional for some truly mind-boggling possibilities.

Close the Accessories window. Nearing the end of our tour, we see another button in the Quick Strip to explore.

The Smpte Button

Click on the SMPTE button. The SMPTE Time window opens and displays the performance time in hours, minutes, seconds, and frames.



Use this as your handy reference when synchronizing *SuperJAM!* to other multi-media hardware and software.

(For more information on SMPTE, see the chapter entitled "*SuperJAM!* and Multi-Media.")

Close the SMPTE Time window .

The Preferences Button

Click on the Preferences button. The *SuperJAM!* Preferences requester opens. The following Preference options are available to you:

- **INTERLACE SCREEN**: Select this option to use *SuperJAM!* with an interlaced screen.

NOTE → If your computer does not contain hardware which corrects flicker, your screen will flicker when in this mode.

- **USE WORKBENCH POINTER**: Select this option to replace the *SuperJAM!* saxophone pointer with your own Workbench pointer.
- **EXPLODING WINDOWS**: Select this option and your windows will appear to explode upon opening and closing.
- **WINDOWS TO FRONT**: Select this to automatically move a window to the front whenever you click on it.
- **SAVE ICONS**: Use this to save each file type created with *SuperJAM!* as an icon.

Memory Savers

For those who are running on a machine which has only 1 meg of memory, we've provided a few options in the Preferences requester which will limit *SuperJAM!*'s consumption of memory.

- **CLOSE WORKBENCH**: Select this item to save memory by discontinuing the use of Workbench.

NOTE → You cannot use the Workbench until you deselect this item.

- **USE GREY SCALE**: When you choose this memory-saving option, the display will not be in color, but will use eight shades of grey instead.
- **DISABLE FAST REFRESH**: When you select this option, all window redrawing will be slower, but you will consume less memory.

Save, Use And Cancel

- **SAVE**: Click on this button to save your *SuperJAM!* Preferences.
- **USE**: Click on this button to use your *SuperJAM!* Preferences during this particularly session only.
- **CANCEL**: Click on this button to disregard any choices you've made since opening this requester.

Conclusion

Okay, that's it. We hope you've enjoyed the *SuperJAM!* whirlwind tour. You've seen just about every window this program has to offer. Now we suggest that you take some time and bang around a bit on the piano keys. Get some music happening. Play with different Styles, chords, key signatures and tempos. Experiment..

Chapter 5

Introduction

In the previous chapters, you discovered that *SuperJAM!* comes loaded with music right out of the box. You made some modifications to and played along with some of the Styles that come with *SuperJAM!*. You became accomplished at jamming at the *SuperJAM!* Keyboard. Then you took the tour and reviewed the many levels of musical possibilities within *SuperJAM!*.

Now that you're comfortable with interactive jamming in the Keyboard window, it's time to move on. It's time to take those Styles and chords and piece together a complete Song with them!

Most pieces of music can be broken down into individual pieces, or Sections, that describe specific phases of the performance. For example, a Song might be composed of a verse Section followed by a chorus Section, then another verse Section, then a bridge Section, and so on.

In *SuperJAM!*, a Song is composed of Sections as well. In this chapter, we will start by building a Section, then learn how to assemble a Song from multiple Sections.

As always, the best place to start is in the Keyboard window.

Creating A Section

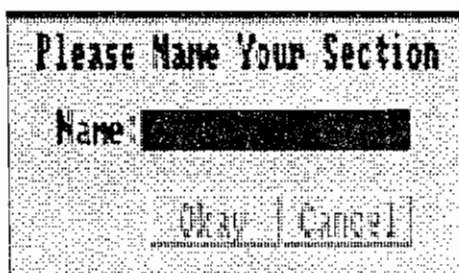
From the Keyboard window, choose any Style by clicking on its button to the left of the piano keys. Then click on the Play button to hear it in action. As you learned in the previous chapters, you can play along and experiment until you like what you see and hear.

Make adjustments to the key signature and tempo to suit your taste. The key signature, tempo, style, current chord, and instrument settings will be transferred to the next Section you create.

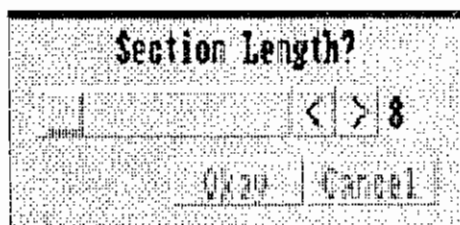
When you are ready to create your first Section, do the following:

Setting Up Your Section:

1. Click on the Section button in the Keyboard window (located third from the right.) The Section Name requester appears.



2. Enter a name for the new Section in the requester and click OK or press Enter. The Measure Length requester then appears.



3. Use the slider bar or the arrow buttons to select the number of measures that the Section will contain and click OK. By default, the Section is 8 measures in length.
-

★ TIP ★ Remember, a Song is comprised of an unlimited number of Sections. Every time you click on the Section button, you're adding a new Section to your Song.

BUILDING A SONG

The Section window opens with your Section name in the title bar. Notice that the key signature, tempo and Style that you chose in the Keyboard window have been automatically transferred to the Section window. Notice also that the last chord you were playing in the Keyboard window appears as the first chord in this Section.

Create your Section by clicking on the Start button found in the Section window (third from the right.) This plays the Section through once, starting with a two-measure countdown.

★ TIP ★ You can disable the countdown from the Preferences menu.

NOTE → To play the Section over and over in a loop, use the second button, the Play button. Notice that once the Section starts playing, the Play button turns into a Stop button so that you can stop at any time.

Entering Chord Changes Into The Section

There are 4 ways to assign chords to your Section:

- from the *SuperJAM!* Keyboard
- from the lower octaves of your MIDI keyboard (optional)
- with the mouse
- from the Load command in the Chords menu

In addition, these new chord progressions can be added in real-time (as the Style plays) or in static mode (while the Song is not playing.)

Entering Chords From The Keyboard

Let's start by adding chord progressions on-the-fly. The next example demonstrates how to add a chord to your Section from the Keyboard window.

NOTE → In the Section window, activate the Pencil (enter) by clicking on it (if it is not currently activated.)

Example:

1. Click on the Play button to start recording in a loop. The music begins playing in the Style you've chosen.
 2. Move the Pencil into the Keyboard window and click on a piano key. The chord assigned to that piano key appears in the Section window at the point in time that you played it.
-

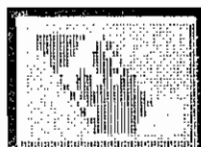
Using the above method, continue to add chord changes until your Section sounds good.

★ **TIP** ★ If you enter a chord on the same beat and measure presently occupied by another chord, it replaces the old chord entry.

NOTE → Just as you may press the keys on your Amiga keyboard to play chords in the Keyboard window, you may also use them to enter chords into the Section. Likewise, you may use the bottom octaves of your MIDI keyboard to enter chords.



You can alter the existing chords in your Section by using the Magic Wand. First click on the Magic Wand's button. As the Song Marker approaches the chord you wish to change, play the desired new chord on the piano keys and watch the target chord change value.



Select the Eraser to remove chords. As the Song Marker moves across a chord that you want to erase, hold down

any note on the keyboard and *SuperJAM!* removes the chord.

NOTE → Remember, in order to enter, edit, and delete chord changes from the Keyboard, the Section must be playing.

★ TIP ★ If something unexpected happens (i.e., a chord suddenly disappears or appears) check to see in which mouse mode you are. For example, if you last used the Eraser and you are playing back the Style while attempting to play a chord from the Keyboard, it may erase a chord from your work.

Chord Preferences

While the above method of entering chords works very well for entering chords on-the-fly, you may want to work directly in the Section window and enter chords with the mouse.

Before we attempt entering chords with the mouse, there are several options in the Section window's Preferences menu that you should consider.

If you enable Automatic Chord Selection, *SuperJAM!* tries to find a chord for you, based on the note that you select and the Section's key signature. Otherwise, it prompts you with a list of available chords (the Chord Palette.)

And, when you have Automatic Chord Selection turned on, *SuperJAM!* gives you two further options: Create Chords On All Notes and Create 7th Chords. If Create Chords On All Notes is enabled and you select a note that is not within the key, it still chooses a chord for you. Otherwise, it opens the Chord Palette and lets you choose the chord. If Create 7th Chords is enabled, it automatically selects 7th chords as opposed to basic triads.

NOTE → You may recognize the Create Chords On All Notes and Create 7th Chords options from the Keyboard window.

If you enable Automatic Octave Selection, *SuperJAM!* decides in which octave (upper or lower) to place the chord; otherwise, it lets you decide.

By default, both Automatic Chord Selection and Automatic Octave Selection are turned on; this makes selecting the "right" chords easier.

Entering Chords From The Section Window

In addition to entering chords into your Section from the Keyboard window, you can also enter them directly from the Section window.

Use the following method for entering chords from the Section window:

Entering Chords With The Mouse:

1. Activate the Pencil to enter by clicking on it (if it is not currently activated.)
2. Move the Pencil above the color blocks, in the grey area above the measure numbers.
3. Click and hold. The Mini-keyboard menu appears under the mouse.
4. Slide the mouse pointer over the keys until the note you want is highlighted; then release the mouse button.
5. If Automatic Octave Selection is not enabled, the Octave menu appears under the mouse. Select Upper or Lower Octave by clicking on it.

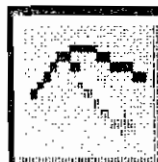
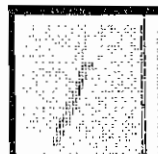
6. If Automatic Chord Selection is not enabled, the Chord list appears under the mouse. Slide the mouse pointer to the desired chord and click down on it.



The chord appears above the beat of the measure (where the Pencil was pointing when you clicked the mouse) and now the Style has a chord progression that you hear when you play the Section.

★ TIP ★ You can use the above method on-the-fly by playing the Section while you enter new chords with the mouse.

Try entering some more changes using the above method. Don't worry if you don't like the sound. You can always change it.



Erase a chord by selecting the Eraser and clicking the Eraser tip on the chord you wish to erase.

Change a chord by selecting the Magic Wand and clicking the wand tip on the chord you wish to change. As with entering a chord with the Pencil, the Magic Wand conforms with the Automatic Chord Selection and Automatic Octave Selection options.

★ TIP ★ You can also change existing chords by clicking on them with the Pencil.

The Chords Menu

Use the Chords menu to load, save, and clear your chord progression. The Chords menu contains the following commands:

BUILDING A SONG

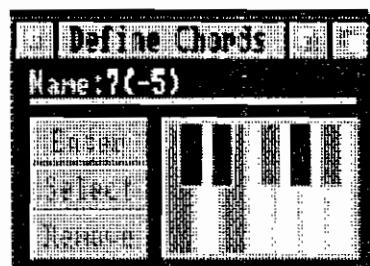
- **CLEAR:** Removes all chords from the Section window. All other settings remain unchanged.
- **LOAD:** Loads a chord progression from disk, which replaces the currently installed chords. *SuperJAM!* automatically transposes this chord progression to the currently selected key signature.

NOTE → *SuperJAM!* comes with dozens of pre-designed chord progressions. To access them, load them from the Chord Progressions directory that came on your *SuperJAM!* program disk(s).

- **SAVE:** Saves the currently installed chords to disk by first opening the file requester. All chords currently used in the Section will be saved in their exact sequence and their original position on the beat and within the measure.

Defining & Entering A Custom Chord

In addition to entering an existing chord, you can also enter chords you've created. *SuperJAM!* lets you customize any chord to your liking and specifications with its Define Chords window.



NOTE → You can build your own custom chord in the following manner at any time regardless of what window you are in.

Designing Custom Chords:

1. Click on the Chords button located in the *SuperJAM!* Bar at the top of your screen. The Define Chords window appears.
 2. Click on any number of white piano keys to activate them. The keys turn blue.
 3. Click on any blue keys that you do not want as members of your chord. The keys turn white when they are deactivated.
 4. If you like, give the chord a new name either by typing in additional letters and/or numbers or erasing the current name and entering a new one.
 5. Click on the Add button.
-

★ TIP ★ You can define a custom chord based on an existing chord by clicking and holding the Select button until the Chord list appears, highlighting the desired chord and releasing the mouse button. The chord name and notes are displayed. At that point, you can then further modify the chord.

Notice that *SuperJAM!* plays the chord as you modify it. In fact, if the Keyboard window is playing, the Band performs your chord in accordance with the selected Style while you change it in real time! Experiment with the chord and hear it as it plays. Once you are satisfied, add it to the Chords list. Then place it anywhere in your Section using the methods of entering chords already discussed.

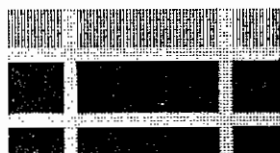
Once a chord has been created and defined in the chords window, it will appear in the Chords list alongside *SuperJAM!*'s default chords.

Muting A Player

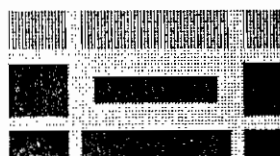
As the producer, you may want to hear certain Players (Members of the Band) and not others during certain points in your music. More specifically, you may want to hear certain Players perform only certain measures and beats within the Section.

Notice that in the Section window there are rows of colored bars. These bars are color-coordinated with each Player button. For example, the Guitar button is color-coded red and the corresponding Color Bars in the measure for that Player are also red. *SuperJAM!* represents the Players (Band Members) with the following colors:

- Lead = yellow
- Strings = purple
- Guitar = red
- Keyboard = black
- Bass = blue
- Drums = grey



Whenever a bar is full-sized, the Player plays during that beat. If the bar is half-sized, the Player is muted. Use the Eraser to mute beats, the Pencil to unmute beats, and the Magic Wand to toggle the mute status of each beat.



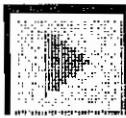
- ★ TIP ★ To quickly mute or unmute many Players in one beat of a measure or to mute one Player across many measures, click and drag the mouse across the appropriate bars. They will all shrink or be restored to original size.

The following example demonstrates how to mute the Strings part for the second beat of the first measure and the

Bass part for the first, second and third beats of the second measure.

Example:

1. Using the Magic Wand, click on the 2nd purple bar from the left in measure number 1. The purple bar shrinks to half of its original size.
2. Click on the first 3 blue bars from the left, beginning just under the 2nd measure.
3. Click on the Play button and listen.



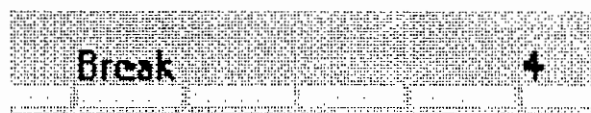
Of course, you can also mute and unmute while the Section plays.

Enhancing Your Section

SuperJAM! provides 4 types of Embellishments that can be used to create musical transitions: These options are available to you in the Section window:

- Intro: To start the performance
- Fill: To add a musical flourish
- Break: To add a break from the standard groove
- End: To conclude the performance

These Embellishments can be used anywhere throughout a Section, even though they were designed to perform a specific musical function. For example, theoretically, you could start your Section with an End or end your Section with an Intro.



Every Style that comes with *SuperJAM!* contains each of the above musical Embellishments. Use the Pencil to enter Embellishments, the Eraser to remove them, and the Magic Wand to change them.

Inserting An Embellishment:

1. Click and hold on the grey area just above the Color Bars in the Section window with the Pencil. A pop-up menu appears which lists the four Embellishment options.
2. While holding down the mouse button, slide the pointer up and down until the appropriate button is depressed.
3. Release the mouse button.

Your chosen Embellishment is now written over the measure number and your Band flawlessly performs the musical feat.

NOTE → Only the Fill option is available directly from the Keyboard window.

Setting The Style, Tempo, And Key Signature

Although the Style, tempo, and key signature were automatically transferred from the Keyboard window, you may change any or all of these at any time. This is an important feature, because it lets you choose a different set of these parameters for every Section of your Song. For example, you could be writing a Song that is a slow ballad

BUILDING A SONG

during the verse and chorus Sections, then switches to a fast rock during the bridge. To accomplish this, you might set the tempo and Style during the verse and chorus Sections to 90 and 12-8ballad respectively, yet set the tempo and Style in the bridge Section to 120 and Rock 1.

To change the Style, click on the Style button. *SuperJAM!* displays a scrolling list of Styles under the mouse. Drag the mouse to your Style of choice, then lift up on the mouse button to select it.

NOTE → If the Style you're looking for does not appear in the Style list, you must install it. Do so by opening the Styles window (click on Styles in the Quick Strip) and selecting Load from the Styles window Style menu.

Change the key signature by clicking on the up and down yellow arrows to change the root of the key and the Happy/Sad Face to select major or harmonic minor respectively.

NOTE → When you raise or lower the key, all chords shift up or down in pitch with the key.

Set the tempo either by clicking on the up and down purple arrows or by clicking down on the tempo number and dragging the mouse up to increase and down to decrease.

Changing The Band

In a professionally performed piece of music, different parts of the Song may be played using different instruments to create a richer texture. For example, the verse may be played on acoustic guitar and piano, while the chorus breaks out with electric guitar and organ.

SuperJAM! operates in the same manner. It lets you define a different set of instruments for each Section. Just as each Section can have its own Style, chords, tempo, and key signature, it can also have its own Band.

Even though the original settings for the Band were carried over from the Keyboard when you first created your

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Section, you can change them at any time. To change the Band, click on the Band button next to the Song button. The familiar Band window appears. You may assign a new instrument to any or each Player.



Verse				
1	72	↓↑		
2	50	↓↑		
3	60	↓↑		
4	1	↓↑		
5	70	↓↑		
6	0	↓↑		

NOTE → The Band window displays the Section's name in its title bar. This indicates that this Band's configuration applies to its associated Section.

The Section Menu

Now that we've mastered the finer points of constructing a Section, there are several global commands that pertain to the Section as a whole. These can all be found in the Section menu as follows:

- **NEW:** If you're thoroughly unhappy with your Section and would like to clear all chords, commands, and mutes, select the New command. This opens the New Length requester. Set the length of the new Section in measures and then choose Okay or Cancel. Choosing Okay erases all previous work from memory (not the disk) and displays a new, empty Section. Cancel ignores the New command and returns the Section unchanged.
 - **LOAD:** You may replace the current Section with another Section that was previously saved to disk with this command. The Load command opens the file requester, in which you select the Section file to load. This command replaces everything contained in that Section, from chords to Style to instruments, with the new Section.
- 

BUILDING A SONG

- **SAVE**: Use the Save command to save the Section to disk. This saves the complete Section, including the Style choice, chords, key signature, and Band instruments.
- **EXPORT**: Use the Export command to save the Section for use by another *SuperJAM!* musician. The Export command saves everything in the Section, except for the Band. When another *SuperJAM!* user loads an exported Section, *SuperJAM!* copies the Band currently in his or her keyboard into the Section. The demo Sections that come with *SuperJAM!* were saved with the Export command.
- **LENGTH**: To make the Section longer or shorter, select the Length command. This opens the New Length requester. Enter the new length in number of measures. If the new entry is shorter than the current Section's length, all chord changes, commands, and mutes beyond the new length are lost. Everything that falls within the new length is displayed in the Section as before.
- **NAME**: Rename the Section by using the Name command. This opens the Change Section Name requester. Enter a new name after the Name: prompt; then click on the Okay button.
- **REPEAT**: When *SuperJAM!* plays a Song, each Section may be set to repeat a certain number of times. Change the repeat count for your Section by selecting the Repeat command. This opens the Repeat Count requester, where you may set the repeat count by dragging the slider.

With the exception of the Snapshot feature (to be discussed later in this chapter,) that just about wraps up our tour of the Section window. What you have just created is a Section.

From A Section To A Song

As you already know, a Song is composed of several Sections. To build your Song, you next need the Song



window. To access this window, click on the Section button.

The Song window appears. Notice that your Section is listed there in a yellow box (or red if it is currently active.)

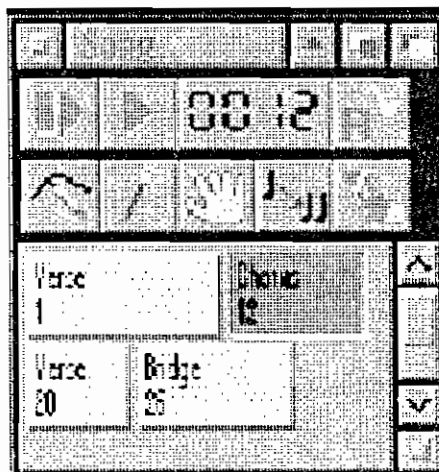
As you create each Section, it is automatically stored there, one after the other. Notice that the Section name and its beginning measure are marked in the colored box.

Example:

If you create a Section named "begin" and make it 4 measures long and one named "end" that is 2 measures long, "end" will start on measure 5, while "begin" will start on measure 1.

The Song window performs two vital *SuperJAM!* functions. It assembles and plays your complete compositions.

Assembling Your Song



Use the Song window to assemble your complete composition by creating, editing, copying, and rearranging the Sections that comprise the Song. The Song window provides almost all of the standard *SuperJAM!* mouse modes. To select one, click on the mode of your choice in the second row of buttons. Once you select a particular

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button, the mouse pointer adopts the appropriate image. For example, if you select the Eraser, the pointer becomes an Eraser. All Sections you touch with the pointer will be erased.

Use the mouse modes in the following manner:

- **PENCIL**: click in the Song window to create a new Section.
- **MAGIC WAND**: click on an existing Section shown in the Song window to open it for editing.
- **HAND**: click down on a Section in the Song window and drag to rearrange its position in the Song.
- **DUPLICATOR**: click down on a Section and drag to place a copy of the Section in the destination.
- **ERASER**: click on a Section to remove it.



★ TIP ★ If you create a Song with so many Sections that you have to scroll the window to see them, click on the Expansion Gadget, the triangle located to the right of the title bar in the Song window, and it will fill the screen.

In addition, one of the Song window menus, the Section menu, assists in the Song construction process. The Section menu commands are:

- **LOAD**: Loads a Section from disk, placing it after the currently selected Section.
- **SAVE**: Saves the currently selected Section to disk. Use this command to create your own library of Sections. Keep the library on hand when putting together a new Song. An idea that didn't work in one composition may be just right for another.
- **EDIT**: Opens the Section window containing the selected Section. (Performs the same function as the Magic Wand.)

NOTE → To set a Section to repeat multiple times, open the Section window with the Magic Wand or the Edit menu command and select Repeat from the Section menu.

Performing Your Song

Use the Song window to perform your compositions. Although the Section, Keyboard, Style, and Pattern Grid windows all have Play buttons, only from the Song window can you perform a completed piece of music.

The Song window provides the following performance-related options:

- Playing the entire Song once
- Playing the Song from the selected Section on
- Recording a separate lead over the Song
- Loading, saving, and clearing the Song
- Exporting the performance as a SMUS or MIDI file
- Synchronizing the performance to MIDI, SMPTE, or external software

Playing The Song

To play the entire Song from the beginning, click on the Start (rectangle and triangle) button. *SuperJAM!* plays each Section in order, changing the tempo to match the tempo of each Section.

To play from the currently selected Section, click on the play (triangle) button.

To the right of the Play button, the Measure Indicator displays the current measure. This increments during the performance, showing you which measure is currently playing.

Recording A Melody

Although *SuperJAM!* performs for you, you might wish to record your own melody line to play along with the Song.

In the Song window, notice a button on the top right containing a red "R" and a yellow saxophone. This is the

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Lead Record button. Use this button to add a lead line or melody over the Sections in the Song window. When this button is depressed, *SuperJAM!* enters Record mode.

If you then press either the Play or Start button, *SuperJAM!* records any notes that you play into a melody track while it performs the Song. After you stop playback, the Record button releases and your melody plays with each subsequent performance.

Recording A Lead Line:

1. In a Song window with one or more Sections, click on the Lead Record button.
2. Click on the Start button. The Song begins to play.
3. While the Song plays, add a melody by entering notes from the *SuperJAM!* Keyboard, your computer keyboard or your MIDI keyboard.
4. When you are done, stop the recording. Notice that the Lead Record button turns off.
5. Click on the Start button to hear your performance.

Now you have a Song complete with a melody. If you don't like what you've played, activate the Lead Record button again and record over it.

NOTE → The lead line cannot be edited. You must re-record the lead line until you are satisfied with the results. This feature is no longer necessary once you couple *SuperJAM!* with *Bars&Pipes Professional*.

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Once you record the lead line, it accompanies your Song every time it plays. If you rearrange the order of the Sections in your Song, the lead line is rearranged as well.



The Song Menu

Use the Song menu to load, save, and erase your composition. The commands found here are identical to the commands found in the *SuperJAM!* button in the Quick Strip.

- **NEW**: Erases the current Song and resets the Keyboard. If you have created a default Song (see the Save command,) it loads and installs the default Song.
- **LOAD**: Loads a previously saved Song from disk.
- **SAVE**: Saves the current Song, including the Keyboard setup, all Sections, and all Instruments, to disk.

★ TIP ★ You can create a default environment by setting up the Keyboard and Keyboard Band exactly as you'd like, then saving to a file named New. To do so, open the file requester with the Save command, clear the line after the Drawer: prompt, press the carriage return key, then type "new" after the File: prompt. Click on Save. From now on, every time you open the program or select the New menu command, *SuperJAM!* loads this default environment.



The Export Menu

The Export menu provides options for saving your *SuperJAM!* composition for use by other programs and/or musicians.

- **SMUS**: Saves your Song in the IFF SMUS format. Many Amiga multi-media programs and simpler music products read SMUS files. For more details, please see the chapter, "Multi-Media Composing."
- **MFF**: Saves your Song in the MIDI File Format. Most music programs on the Amiga, Mac, Atari and IBM computers read MIDI files. For more details, please see the chapter, "*SuperJAM!* and Multi-Media."



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- ***SuperJAM!***: Saves the Song in the *SuperJAM!* Song format, but without including the Bands for each Section. Use this to save a Song for use by somebody else. When he or she loads the Song, all Sections will use his or her Keyboard Band. This is necessary because different users have different MIDI equipment. In fact, all the demo Songs included with *SuperJAM!* were saved with the Export *SuperJAM!* command.

The Timing Menu

The Timing menu provides options for synchronizing your *SuperJAM!* performance with other hardware and software products. Please see the chapter, "SuperJAM! and Multi-Media" for more on the Timing menu options.

That's it with the Song window. We have saved for last a very important feature in the Section window that you should know about before we conclude this chapter...

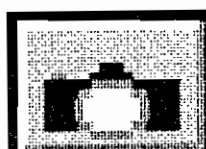
The Snapshot Feature

SuperJAM! continually varies the performance, giving your music a sense of a "live" jam. Listen closely and hear how the music changes as it plays. Your *SuperJAM!* Band never plays the same Section or Song in exactly the same way twice. And that is exactly what a "live" Band is all about.

"That's fantastic," you say, "but what if I really love a certain passage and it doesn't play the same way again? Or, what if I want to go in and edit that performance, then play the edited version?" That's where the Snapshot feature comes in.

Let's go back to the Section window and learn how to use the Snapshot. If the Section window is not open, click with the Magic Wand on a Section in the Song window.

In the Section window, the Snapshot button activates a feature called the Snapshot. The purpose of this feature is to capture, or record, the *SuperJAM!* performance..



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When you activate this button, then click on the Play or Start button, the Section records everything that it plays. When you like what you hear, stop the playback and click the Snapshot button again to turn the Snapshot off.

★ TIP ★ Remember that there are 2 playback modes: Loop (play) and Play Back from the Beginning (start.) You should use the latter (the button with the rectangle and triangle) if you want to Snapshot an exact Section once through. If you use the Loop (Play button) mode, the first measure instantly repeats following the last measure.

NOTE → As long as the Snapshot button is activated (the button background turns yellow,) every pass of the Section is captured or recorded. Each pass through the Section erases the previous one and records a fresh pass.

★ TIP ★ #1 You can leave the Snapshot feature on all the time so that you can stop the playback at any time and be assured that the latest, unique variation of your Section is captured.

★ TIP ★ #2 If your computer has limited memory or you are performing many simultaneous tasks with your Amiga, you should leave the Snapshot feature off until you need it, to free up memory and processor time.

Once you've recorded a Snapshot, you may wish to hear the Snapshot performance again. Clicking on either the Play or Start button will not work because *SuperJAM!* will continue to compose as it plays. Select the Preview Snapshot command from the Snapshot menu. This plays the Section through once, performing only the notes stored in the Snapshot.

Notice that the buttons across the bottom of the Section depress during the Snapshot preview. These buttons, called Lock bars, tell *SuperJAM!* to play the Snapshot instead of composing a new performance.

Using The Lock Bars

Maybe you liked what *SuperJAM!* created for some of the measures in the Section that you captured, but you didn't like what it created for other measures in the same Section. Use the Lock bars to accommodate your discriminating taste.

For example, let's say that your Section is 4 measures and you have taken a Snapshot of one of your Band's ever-changing variations. Maybe you like everything except the second measure.



Just click the Lock bar down in measures 1, 3 and 4. Play the Section again. Now only measure 2 has random variations while measures 1, 3 and 4 are frozen and will not change again.

NOTE → The Lock bars are the long rectangular embossed buttons across the bottom of the Section window. Each controls the measure directly above it.

With this locking method, you can lock one or more of your favorite measures and keep only the ones that you really like.

NOTE → If you lock down a measure before the Snapshot has been recorded, the measure plays nothing, since there's nothing in the Snapshot.

The Snapshot Menu

In addition to the Snapshot Preview command (discussed above,) the Snapshot menu has three other commands:

- **LOCK ALL:** Automatically activates all Lock bars, but does not play back the Snapshot for evaluation. The Lock bars remain activated until they are unlocked either manually or by using the following menu operation.

- **UNLOCK ALL:** Releases all Lock bars and returns the Section to performance mode.
- **CLEAR SNAPSHOT:** Removes all notes previously captured by the Snapshot feature.

Using The Snapshot Grid

Imagine, just listening to the Band subtly change the performance and having the power to say that you like this or that part or you want the Band to play it a certain way every time. Since you are the writer as well as the producer, *SuperJAM!* gives you the power to look into the Snapshot to scrutinize each Player's performance and edit notes as you wish.

Suppose *SuperJAM!* has produced some fantastic music and you have taken a Snapshot of one of the Sections. You may have decided to lock down certain measures so that they won't change.

However, you are just not 100% satisfied with the results. If only you could edit what a particular Band Member played in the Snapshot...

Accessing Your Snapshot For Editing:

-
1. Click on the chosen Player button at the far left of the Section window. The Snapshot Grid window appears.
 2. Scroll, if necessary, to find the octave and/or a range of notes that you want to examine or edit.
-

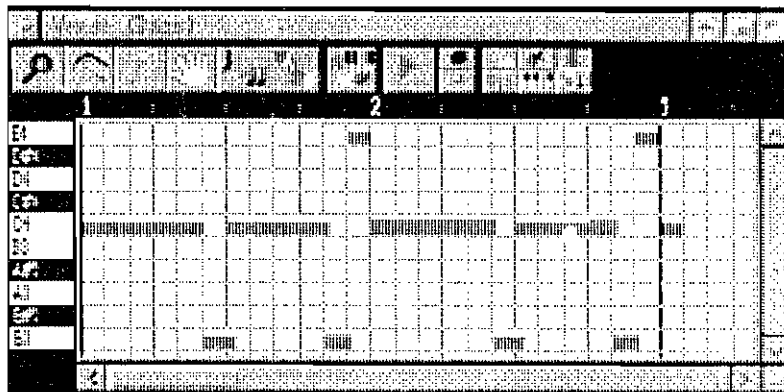
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NOTE → It is possible that the particular Style that you are using does not contain notes for the Player that you have chosen. Therefore, the Snapshot Grid does not contain notes.

★ TIP ★ Use the VU meters in the Keyboard window while the Section is playing to see which Player is performing. If a particular meter doesn't light up, there will be no notes to see or edit in the Snapshot Grid when you choose that Player button.

Remember, for the information to appear in the Snapshot Grid, you must take the Snapshot first.

The Snapshot Grid



Understanding the basics of editing in the Snapshot Grid is very useful because the process is essentially the same as creating and editing the Patterns of which a Style is composed. Later, when you reach the level within *SuperJAM!* of creating your own Styles, you'll see that the Pattern Grid, used to create the Patterns, is very similar. Most of the features are identical and the editing modes and commands are the same.

To avoid confusion, we'll refer to this as the Snapshot Grid and the Pattern editor as the Pattern Grid. However, once you master one, you'll be very familiar with the other.

If you followed the preceding tutorial chapters, you may remember the Snapshot feature. This feature captures or records the Band as it dynamically creates a performance.

Once a Snapshot has been taken, you can click on a Player button to reveal the Snapshot Grid.

Viewing The Snapshot

The Snapshot Grid window displays the selected Player's performance in a piano-roll style grid. The grid displays the piano keys down the left edge of the window as a reference. Across the top, it displays the time reference as measure numbers subdivided by beat markers. It displays notes as blue bars, the vertical position denoting pitch and the horizontal denoting time. Notice that the resolution of the grid boxes is even finer than the beat markers. Each box is the smallest resolution described by the current Style. Usually, this is an eighth or sixteenth note. Vertically, each box is a different note in half steps up or down the scale. Each note is placed in a box. If the note's duration is longer than a box, it may fill several boxes.

NOTE → For the Drum Player, the Snapshot Grid displays drum names down the left border instead of piano notes.

Drag the scroll bar to the right of the grid to view higher or lower pitches. Drag the scroll bar located at the bottom of the Snapshot Grid window, to view the Snapshot at different points in time.

Click on the Zoom In button to see the grid in greater detail, click on the Zoom Out button to see more notes at once.

NOTE → The Zoom In and Zoom Out buttons appear in several of SuperJAM's windows. In every case, they perform the same functions.

Playing The Snapshot

The Snapshot Grid has a Play button. Click on it and the Section will play. When the Play button is depressed, it becomes a Stop button, which you may then click again to stop the performance. The Snapshot plays continuously, looping back to the start, until you stop it.

Use the Perform menu to select which Players actually perform. The Perform menu displays each Player with a

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checkmark by it if it is currently active. Select a Player in the Perform menu to turn it on or off.

★ TIP ★ You can select or deselect multiple Players at once by holding the right mouse button down and clicking with the left.

Select the Solo option in the Perform menu to turn all Players off except for the Player you are editing or viewing.

Editing The Snapshot

When you're in the Snapshot Grid, you have access to all the *SuperJAM!* editing modes. Let's take a tour of the editing modes.

★ TIP ★ You may practice before you actually edit any notes in the grid change by playing along with your computer or MIDI keyboard. Notice that the notes you play (if they are in the same octave shown on the screen) display in red on the far left side of the Snapshot Grid window.

The Magnifying Glass

Click on the Magnifying Glass button. The Note window instantly appears and the mouse pointer turns into a Magnifying Glass.



Move it over a note and click on the note. The Note window displays all of the note's internal values as follows:

- **TIME:** The note's time offset from the grid, measured in 192 pulses per quarter note. For example, a note that plays slightly before the grid box could have a Time value of -12.
- **RANGE:** *SuperJAM!* randomizes the timing of the note as it plays it to give it some extra "feel." This slider sets the degree of randomization.
- **OFFSET:** Moves the note into a later grid box and compensates by adjusting the time. This feature, designed for the Pattern Grid, is of no use when editing a Snapshot.
- **VEL:** The note's velocity, a MIDI value from 1 (very soft) to 127 (very loud.)
- **RANGE:** *SuperJAM!* also randomizes the velocity of each note. This slider sets the degree of "feel."
- **DUR:** The note's duration, measured in 192 pulses per quarter note.
- **RANGE:** *SuperJAM!* also randomizes the duration of each note.

Click on different notes and watch the values in the Note window change.

The Pencil

As mentioned previously in this manual, the Pencil is always used when entering an item for the first time.

Notice that when you click on the Pencil, the Note window remains open. To enter a note, use the Pencil.

Entering A Note With The Pencil:

1. Place the Pencil tip in a box and click once. The note plays and it appears in the box as a red bar. To make a longer note, click and drag the Pencil to the right. To make the note louder or softer, click and drag

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to the right while angling its path slightly up or down.

2. Notice that the Note window that you opened with the magnifying glass changes to display each note as you create it.

3. With the Pencil enabled and the Play button activated, enter notes on-the-fly by clicking on the piano-roll to the left. Alternatively, you can play notes on your MIDI keyboard or the *SuperJAM!* Keyboard.

NOTE → When entering notes on-the-fly, *SuperJAM!* can lock the notes to the grid, or record them exactly as you play them. Enable the **Auto Quantize** flag in the Preferences menu if you want the notes locked to the grid.

The Magic Wand You can use the Magic Wand to change the length or dynamic level of a note. Put the wand tip on any note in the grid, click and hold on the note. Drag the note to change the length and dynamics and release the mouse button. Watch the values change in the Note window (if it's still open.)

★ **TIP** ★ The Pencil automatically turns into the Magic Wand if you click down and hold on a note. This way, you have access to the features offered by both.

The Hand

To move the position of a note, click on the Hand button. Then point the Hand at the note, and click and drag it anywhere in the grid. *SuperJAM!* plays the note as you drag it.

The Duplicator

To make a copy of a note, use the Duplicator. To do so, click on the Duplicator button and position it so that the blue lines of the pointer (upper left corner) are anywhere on the note. Then, click and drag the note to a new position. When you lift up on the mouse, you'll find a copy of the note.

The Eraser

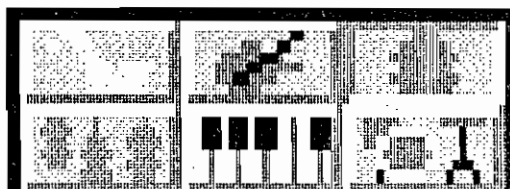
To remove notes, click on the Eraser button. Position the mouse pointer over a note and click down to erase it.

★ TIP ★ If you hold the mouse button down and drag the pointer, you can erase a bunch of notes at once by dragging the Eraser over them.

Like the Pencil, you can use the Eraser from the Keyboard as well. Erase notes by holding down the notes on your keyboard that you'd like to remove while the Snapshot plays.

Viewing Other Players

While you are in the Snapshot Grid for a particular Player you can open one of the other Player windows with the Player buttons located to the right of the Play button.



By default, when you select a different Player, *SuperJAM!* opens a Snapshot Grid for the second Player and closes the grid for the current Player. Should you desire to have both windows open for comparison purposes, go to the * Preferences menu and select the Multiple Grid Windows option. This allows multiple Snapshot windows to open at the same time. Then, click on another Player. The new window opens, leaving your current window behind it.

NOTE → Multiple Snapshot windows can eat up memory and slow the display down. We recommend keeping this option disabled unless necessary.

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That completes our tour of the Snapshot Grid. Remember, any changes you make to the Snapshot will only be performed by *SuperJAM!* if you activate the Lock bars in the Section window.

What's Next?

- If you're using the TurboSound Technology and would like to create your own Instruments, read through the next chapter.
- If you're ready to start creating your own Styles, skip ahead to "The Elements Of Style."
- If you'd like to take your compositions and link them up with other programs, go straight to "*SuperJAM!* and Multi-Media."



Chapter 6

Why Turbosound?

Although MIDI sound modules have recently dropped dramatically in price, having to have MIDI equipment deprives a lot of creative Amiga owners of the chance to produce their own music.

By the same token, the standard four voices that the Amiga provides just aren't enough for the *SuperJAM!* Band. Imagine trying to squeeze drums, bass, piano, guitar, strings, and melody into four sounds at a time. Then remember that some of the *SuperJAM!* Band Members perform more than one note at a time!

To overcome your possible lack of MIDI equipment as well as the limitations of the Amiga's sound capabilities, we have developed a special technology to perform your *SuperJAM!* compositions. Called TurboSound Technology, it can play six or more sounds at once on your current system with no additional hardware. The more powerful your computer, the more TurboSounds it can play. Accelerated computers can play up to 16 voices at a time.

IFF is the standard sound format for the Amiga computer. Because of its unique design, TurboSound can not play IFF sounds directly. Instead, IFF sounds must be converted into the TurboSound format.

To accomplish the transformation from IFF to TurboSound, we've included the TurboSound Editor. A sophisticated sound editor in its own right, the TurboSound Editor provides the tools to create your own musical instruments with the greatest of ease.

How Turbosounds Work

The TurboSound Editor creates Instruments by importing standard Amiga IFF samples and converting them into TurboSounds with a palette of sophisticated tools. You will find that the TurboSound Editor rivals the best sample

editors available on the Amiga today. It is designed with one specific goal in mind: to create musical instruments for *SuperJAM!* as easily as possible.

Before we start, we'll describe in greater detail how TurboSounds work.

As you may know, Amiga IFF sample instruments are composed of one sample for every octave. The Amiga's internal sound circuitry can take one sample and make it play over an entire octave by altering the pitch at which it plays the sample. Unfortunately, the Amiga has only four sets of sound hardware. Using this method, the Amiga can only play four instruments at one time.

Turbosound Technology circumvents this limitation by mixing several instruments together and playing the resulting combination on just one Amiga sound channel. This has the great advantage of removing the limit on the number of sounds that can be played at once.

This also means, however, that we can no longer take advantage of the sound circuitry's ability to shift a sample to play at a particular pitch within the octave. Instead, we must create a set of samples, each designed to play at a unique pitch within the octave. Rather than providing a sample for every octave, as IFF sounds do, we must now provide a sample for every note in every octave.

If the above paragraph seems technically intimidating, just keep these points in mind:

- TurboSound Instruments are composed of one sample for every note.
- There are twelve notes in an octave.
- There are ten octaves in a TurboSound Instrument.

TurboSound Instruments can take up a lot of memory. It's a good idea to design samples that conserve memory.

TURBOSOUND TECHNOLOGY

The Turbosound Instrument Library

To get you started, *SuperJAM!* comes complete with a disk full of TurboSounds. Because this is a comprehensive collection, you may never need to create your own samples. However, if you'd like to take existing TurboSounds and change them, or create new Instruments from IFF samples, please read on.

Designing Turbosounds

SuperJAM! provides a wealth of tools to enable you to expertly design your own TurboSound Instruments. Before we go into detail, let's briefly go over elements that go into the creation of a TurboSound.

Building A Turbosound Instrument:

1. Choose any note in any octave.
2. Import a sound file into the note's sample buffer.
3. Tune the sample to be perfectly in pitch.
4. Cut, Copy & Paste sections of the sample.
5. Apply special effects to the sample.
6. Set the sample's loop points.
7. Copy the sample to fill an octave.
8. Build an Instrument out of samples.

9. Save the TurboSound Instrument.

Let's walk through these steps in detail. Before we start, insure a clean slate by selecting the New command in the TurboSound menu.

Using The Turbosound Editor

The TurboSound Editor is accessed through any *SuperJAM!* window via the Band buttons.

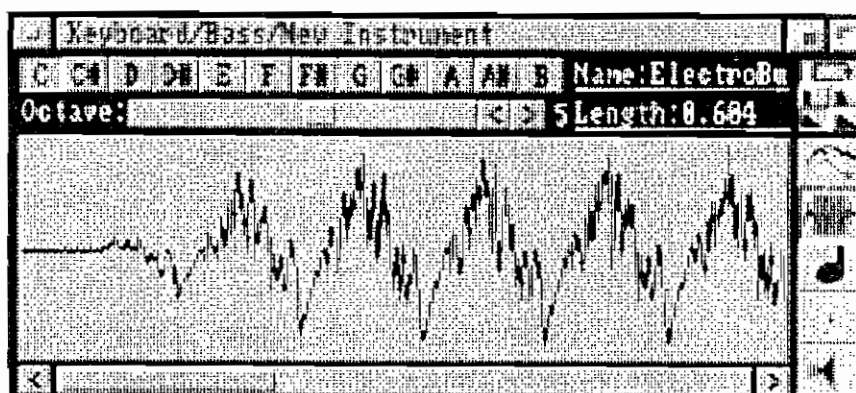
To open the TurboSound Editor, complete the following steps:

Accessing The Turbosound Editor Window:



1. Click on the Band button. The Band window appears.
 2. Each of the six Players can perform on its own TurboSound Instrument. Find the Player whose Instrument you'd like to edit. If the button is currently a Speaker button icon, skip this step. If there's a MIDI icon displayed just to the right of the Player, click on the MIDI button and it changes (toggles) to a Speaker button. This button represents the TurboSound option.
 3. Click on the Player button. The TurboSound Editor opens.
-

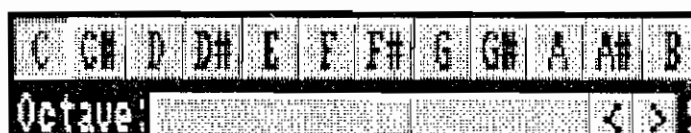
TURBOSOUND TECHNOLOGY



NOTE → If you are running SuperJAM from within Bars&Pipes Professional, TurboSound is a separate Tool. Drag a TurboSound Tool from the ToolBox, place it in a PipeLine, then double click on it to open the TurboSound Editor.

Selecting A Sample

Under the title bar is a row of 12 Note buttons. The TurboSound Editor gives you the power to assign a unique sample to each note in the octave.



Click on a Note button to select it. For now, since we will be loading a sample, we highly recommend that you choose "C", because most IFF samples are tuned to "C". Later, you will use the TurboSound Editor to tune the sample to fit the other notes in the octave.

Under the row of Note buttons you'll find a slider bar with the name Octave: displayed on the left. Use the slider button or click on the slider's arrow buttons to move the octave up or down. This determines to which octave the note belongs.

Loading Your Sample

NOTE → Although the TurboSound Editor does have a Pencil for drawing directly in a sample, you can not create a sample from scratch. You must always load a sample first; then build your TurboSound Instrument from there.

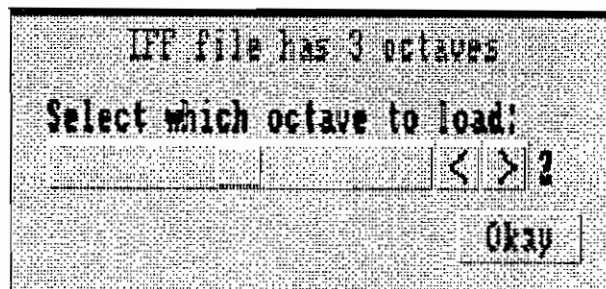
We've provided a few samples to play with in the Samples directory on the TurboSound disk. However, if you're serious about creating your own TurboSound Instruments, you should either invest in sampling hardware to create sampled sounds, or collect a library of sounds. There are many IFF samples floating around in the public domain.

If your samples are on a floppy disk, insert it in the drive of your choice. Then do the following:

Loading A Sample:

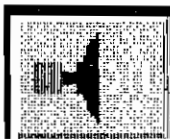
1. Select the Load command from the Sample menu. The file requester appears.
2. Click on the appropriate volume, directory and disk drive containing the samples you want to import. Double click on the sample of your choice.
3. If the sample is an IFF instrument, the IFF requester appears. Choose which octave of the IFF sample you want to load and click Okay. **Super-JAM!** loads the sample and displays it.

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4. Click on the Speaker button (bottom right) to hear the sample.

At this point, the sample is loaded; however, if you start a *SuperJAM!* performance at this time, just this one note plays.



As you work on a sample, audition it by clicking on the Speaker button. You can determine what part of the sample the Speaker button plays by selecting All, Displayed, or Region from the Play command in the Preferences menu.

- **ALL:** plays the entire sample.
- **DISPLAYED:** plays the visible portion of the sample.
- **REGION:** plays only the segment of the sample currently highlighted (More on that later.)

NOTE → To hear the sound with the Speaker button, you must have your Amiga properly connected to a pair of Speaker buttons. Also be sure that the volume on your amplifier or monitor is up.

For a closer view of the sample, click on the Zoom In button (the large note on the right.) To see more of the sample, click on the Zoom Out button. Drag the scroll bar below the sample display to scroll the view.

The Name: field to the right of the Note and Octave selectors displays the name of the sample. Below it, the Length : field displays the length of the sample in bytes. Click on the Length :field once to see the length of the sample in seconds.

SuperJAM! only loads the sample into one note of the octave. If you click on other notes, observe that they are still blank. This is a very important distinction between TurboSound and IFF formats. Later in this chapter, you will learn how to assign a sample to an entire octave with the click of the mouse.

But first, let's work on improving this sample...

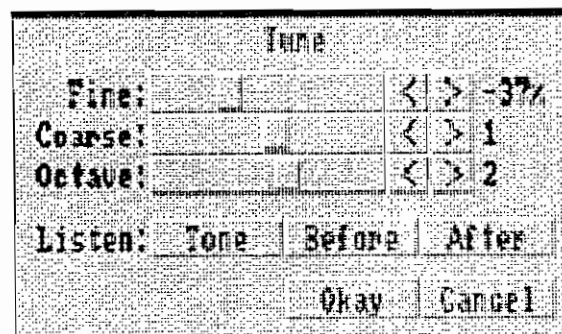
Tuning Your Sample

It's absolutely critical that your TurboSound Instrument be perfectly in tune. If your Instrument is not in tune, your music will be adversely affected. Unfortunately, samples are often recorded slightly out of tune.

To rectify this problem, tune your sample with the Tune command in the Sample menu in the following manner:

Tuning Your Sample:

1. Select the Tune command from the Sample menu. The Tune requester opens.



2. Click on the Tone button to hear a reference pitch.
3. Click on the Before button to compare the sample with the reference tone.

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4. Adjust the sample's pitch to match the reference tone by dragging the Fine: and Coarse: sliders.
5. Click on the After button to compare the tone with the tuned sample.
6. Click on Okay to accept the tuning and close the Tune requester.

NOTE → If the sample is off by an octave or more, you may have loaded the sample into the wrong octave. Consider transferring the sample to the correct octave with the Sample menu's Cut and Paste commands, or go back to the Load command and load a different octave from disk.

Cut And Paste Editing

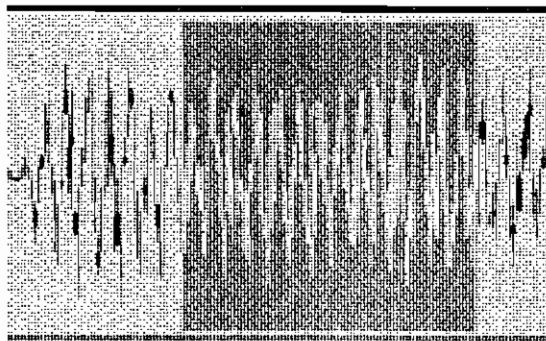
The TurboSound Editor comes with a full complement of Cut & Paste editing commands. For example, you can rearrange your sample by selecting a chunk of the sample, cutting it, then pasting it elsewhere.

Use the editing commands by selecting a region with the mouse, then choosing a command from the Edit menu. Here's an example of cutting and pasting a section.

Example:

1. Click on the Region Edit button under the Pencil button on the right.
2. Select the region to cut by clicking within the display and dragging the mouse. *Super-JAM!* draws a purple rectangle around the region.





3. Select Cut from the Edit menu. *SuperJAM!* removes the region from the sample.
 4. Click in the display to set the pointer to a new position.
 5. Select Paste from the Edit menu to insert the previously cut region at the pointer.
 6. Click on the Speaker button and listen to the damage.
-

You may have noticed how hard it is to select a specific region of a sample with the mouse. *SuperJAM!* provides two options in the Alignment submenu of the Preferences menu that aid in accurately selecting the edit region.

The first option, Zero Crossings, guarantees that the region boundaries line up with points in the sample where the signal crosses the center line. This has one major benefit: transitions from one region to another sound much smoother because they match.

The second option, Tuned, guarantees that any region you select with the mouse is an exact harmonic multiple of the note's frequency.

- Use Zero Crossing to avoid a clicking sound in your edits.
- Use Tuned to keep your edits musical.

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★ TIP ★ It's a good idea to turn both options on and forget about them.

Including the Cut and Paste commands, *SuperJAM!* provides eleven commands in the Edit menu:

- **CUT**: Removes the selected portion of the sample and stores it in a buffer.
- **COPY**: Creates a copy of the selected portion of the sample and places it in the memory buffer to be pasted later. This command does not alter the sample.
- **KEEP**: Erases the portions of the sample before and after the selected region.
- **PASTE**: Inserts the region of the sample stored in the buffer after the pointer.
- **MIX**: Merges the region of the sample stored in the buffer with the currently selected region in the sample.
- **ERASE**: Clears the selected portion of the sample.
- **INSERT**: Inserts a blank region in the selected area.
- **SET LOOP**: Sets the sample to loop within the selected region. More on looping later...
- **UNDO**: Reverts the sample to its condition prior to the last command.
- **SELECT ALL**: Sets the selected region to encompass the entire sample.
- **SELECT LOOP**: Sets the selected region to the looped portion.

Try to reduce the size of your sample, where possible. The larger a sample, the more memory and processor power required to handle it. Use the commands in the Edit menu to reduce the size of the sample as much as possible. Here's a typical procedure for trimming the fat:

Example:

1. Select a region with the mouse.
 2. Choose the Region option in the Play submenu of the Preferences menu.
 3. Click on the Speaker button. Only the highlighted region plays.
 4. If the playback sounds right, execute the Keep command in the Edit menu to retain just the selected portion of the sample.
 5. Reset the Speaker button to play the entire sample by choosing All in the Play submenu.
-

NOTE → Display is the third option for playback in the Preferences Play menu. When Display is selected, the Speaker button plays just the segment of the sample displayed in the TurboSound window.

As you know, Turbosound Technology is unique in that it uses a separate sample for each note of the octave. Sometimes, it may be the same sample for each note, just shifted in pitch. Other times, it's a separately recorded sample for every note.

It's important to keep each sample as small as possible without sacrificing fidelity.

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Example:

If each sample is 41,000 bytes in length, and you need one for each note, an octave will need 492,000 bytes for only one octave of one Instrument.

This hefty sum must be stored in memory for TurboSound to do its magic. This is why the TurboSound Editor puts so much emphasis on memory saving techniques.

Applying Special Effects

You can also alter the sound of a sample with the commands in the Effects menu. To apply an effect, select a region in the sample, then choose any of the eight commands found in the Effects menu:

- **FILTER**: Decreases or rounds off the high frequencies (extremely high, jagged peaks in the wave form) in the selected portion of the wave form. The effect is to make the sound softer, more mellow, less bright.

NOTE → Repeating the Filter command to the same selected portion of the wave form will continue to flatten the wave form.

- **CROSS FADE**: Blends the beginning of the selected region with the end, to create a smooth transition for looped samples. More on this when we discuss looping...
- **FADE IN**: Sets the sound to fade in during the selected region. Useful for creating sounds with a slow attack, for example, strings.
- **FADE OUT**: Sets the sound to fade out during the selected region. Useful for creating sounds that decay, for example, drums.
- **MAXIMIZE**: Sets the selected region to play at full volume.

- **REVERSE:** Flips the selected portion of the wave form to play backwards in time.
- **INVERT:** Inverts the selected portion of the wave form 180 degrees around its center line. The sample peaks become valleys and the valleys becomes peaks.
- **CENTER:** Shifts the selected portion of the wave form up or down as needed to center it vertically. An off-center sample can create a clicking sound when it plays.

★ TIP ★ If you execute an effect and don't like it, remove it with the Undo command in the Edit menu.

In addition to the available effects and editing commands, you can also draw directly into the sample to alter it by hand. To do so, click on the Pencil button to activate the Mouse Draw mode. Once activated, the mouse pointer becomes a Pencil. Click down in the display and draw with the mouse.

NOTE → Even when drawing with the Pencil, you must first start with a loaded sample. You can not draw into an empty sample.

You'll find the Pencil useful only for touching up sounds, not drawing realistic samples.

Looping Your Sample



To conserve space, most sampled musical instruments incorporate a looped section. On playback, once the sample reaches the looped section, it plays the looped segment over and over until the note releases. An organ is a good example of an instrument that benefits from looping. Once the organ starts playing, it produces a constant tone, easily replicated by looping the constant section of the sound. On the other hand, it makes no sense to loop a drum because a drum sound plays once without any continuous tone.

Turn on looping by activating the Loop button in the upper right corner under the title bar. The button stays down and the black loop turns red to indicate that the feature is active.

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To work properly, the loop feature needs to know where in the sample to start the loop, and where to end it. Setting the loop points is an art in itself.

Setting Your Loop:

1. Set the Alignment options in the Preferences menu to Zero Crossings and Tuned. These will help create loop points that sound right.
 2. Scroll to the part of the sample you'd like to loop and Zoom In to see it in greater detail.
 3. Select the looped segment by clicking and dragging with the mouse. Try to keep the loop small, preferably only a few cycles of the wave form.
 4. Select Set Loop from the Edit menu.
 5. Click on the Speaker button and listen to the loop. If it sounds out of tune or unrecognizable, go back to step 3.
 6. Select the Cross Fade command in the Effects menu. This makes the loop smoother.
 7. Listen again with the Speaker button. If the loop doesn't sound right, select the Undo command and go back to step 3.
-

NOTE → The Loop button applies to the each individual sample within a TurboSound Instrument.

Once a sample loops, it no longer has an end portion that fades out. Instead, the TurboSound software fades the sound out as soon as the note releases.

The group of four Decay buttons under the Loop button determine the fade out rate. The angle of the slope represents the decay time. The top left decay is an abrupt stop, while the bottom right decay is slow. Click on each button and listen to it with the Speaker button.

Like the Loop button, the Decay buttons apply to the each sample in a TurboSound Instrument.

Building An Instrument

Once you've loaded, tuned, trimmed and looped your samples, it's time to start putting together an Instrument.

The Sample menu provides a set of important commands that helps you organize your samples into an Instrument.

The Create Octave Command

Easily the most powerful command in the Sample menu is the Create Octave command. This takes the currently displayed sample and creates a set of identical samples to fill the eleven notes above the sample, completing one octave.

NOTE → The Create Octave command produces tuned copies of the original sample. In other words, each sample sounds the same as the original, just higher in pitch.

A typical method for building an Instrument involves designing the sample for the bottom ("C") of every octave, then using the Create Octave command to fill the octaves.

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★ TIP ★ Always design a sample on the note "C," then build the rest of the octave with the Create Octave command. Octaves based on other notes rarely work as well (for obscure mathematical reasons!)

NOTE → After using the Create Octave command, you may notice that some of the notes have larger loops than others. Don't worry. This is necessary to make sure each loop stays in tune.

The Sample Menu

You can also use the Sample menu to Cut and Paste samples between octaves and even between multiple TurboSound windows. Here's a listing of all the Sample menu commands:

- **NEW:** Erases the currently selected sample.
- **LOAD...** Loads a sample from disk. *SuperJAM!* automatically senses the following formats and loads them accordingly: IFF sample, binary sample data, and *SuperJAM!* sample file. (See next command.)
- **SAVE...** Saves the currently selected sample to disk. You can use this command to create a library of samples; then pull from the library when building a new Instrument.
- **COPY:** Duplicates the current sample in its entirety with all associated parameters (such as a new loop point) in a memory buffer to be pasted at a later time.
- **PASTE:** Replaces the sample with whatever has been placed in the memory buffer by the Copy function..

★ TIP ★ Use the Copy and Paste commands to move samples around within an Instrument, and even from one Instrument to another. (Copy a sample in one TurboSound window, then Paste the sample in another TurboSound window.)

- **TUNE...** Opens the Tune Requester. Use this command in conjunction with the Copy and Paste commands to move individual samples around. Use the Tune Requester to fine tune a sample as well as retune a sample for a completely different pitch. For example, let's take the sample in "D", copy it into "D"#, then tune it to "D"#: 

Example:

-
1. Click on the "D" button to select the "D" sample.
 2. Select Copy from the Sample menu.
 3. Click on the "D#" button to select the "D#" sample.
 4. Select Paste from the Sample menu.
 5. Click on the Speaker button. Sounds like "D" to me!
 6. Select Tune... from the Sample menu. The Tune Requester opens.
 7. Click on the Tone button to hear the proper pitch.
 8. Click on the After button to hear the sample. Ouch! Wrong note!
 9. Click on the right arrow after the Coarse slider to shift the pitch up one half-step.
 10. Compare the pitches again. Aye caramba! It works!

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11. Click on Okay to accept the new tuning.

- **CREATE OCTAVE:** Takes the currently selected sample and places tuned copies in each of the 11 notes above the currently displayed note. Performs best if the starting sample is "C".
- **CLEAR OCTAVE:** Erases an octave of samples, starting with the currently selected sample. For example, if "D", octave 5, is selected, Clear Octave erases from "D", octave 5, to "C", octave 6.

Octave Shifting

The TurboSound menu has two commands that are useful when building your Instrument.

- **SHIFT SAMPLES UP 1 OCTAVE:** Repositions all samples up one octave. Moves all of the samples in octave 4 to octave 5, etc.
- **SHIFT SAMPLES DOWN 1 OCTAVE:** Repositions all samples down one octave. Moves all of the samples in octave 4 to octave 3, etc.

★ TIP ★ Don't include extra octaves of samples if you don't need them. Most SuperJAM! Players only perform within a two octave range. Creating an Instrument that goes all the way up or down the keyboard is a waste of memory and disk space.

Saving Your Turbosound Instrument

Once you've completely built a TurboSound Instrument, save it to disk. Use the Save command in the TurboSound menu to do so. Notice that once you've saved the Instrument as a file, the TurboSound window title bar displays the file name as the Instrument name.

NOTE → Don't confuse the Instrument name with the sample name. Each sample has its own name, displayed after the Name: prompt. This helps with multi-sampled Instruments, like drum sets, where the individual sample names (Hi Hat, Tom, Snare,) are important.

From now on, you may use this TurboSound Instrument in your *SuperJAM!* compositions.

Let's take a look at the remaining commands in the TurboSound menu:

- **NEW**: Replaces the currently selected Instrument with a blank Instrument. Use this command in preparation for creating your own Instrument.
 - **SELECT**: Displays a list of currently loaded TurboSound Instruments. Choose an Instrument by clicking on it. The selected Instrument replaces the current Instrument. If no Instruments are currently loaded, no list appears.
 - **LOAD...** Loads a TurboSound Instrument from disk.
- ★ TIP ★ If you'd like to use an Instrument that is already loaded elsewhere, access the Instrument with the Select command, instead of loading it a second time.
- **SAVE...** Saves the TurboSound Instrument to disk. You must always save a TurboSound Instrument when you have finished building it.

NOTE → Unlike the rest of the SuperJAM! Band, the TurboSound Instruments are kept in separate files. This avoids the redundancy of saving the same samples in every Song file.

- **SHIFT SAMPLES UP 1 OCTAVE**: Repositions all samples up one octave. Moves all of the samples in octave 4 to octave 5, etc.
- **SHIFT SAMPLES DOWN 1 OCTAVE**: Repositions all samples down one octave. Moves all of the samples in octave 4 to octave 3, etc.

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- **TUNE UP ONE OCTAVE:** Takes the entire Instrument and shifts the pitch of every sample within that Instrument up one octave. This compensates for pitch shifting that occurs when switching from a lower to a higher sample rate.
- **TUNE DOWN ONE OCTAVE:** Take the entire Instrument and shifts the pitch of every sample within that Instrument down one octave. This compensates for pitch shifting that occurs when switching from a higher to a lower sample rate.

NOTE → When you use the Tune Up One Octave and then use the Tune Down One Octave command, your sample will lose its higher frequencies, which results in a duller sound. We advise against doing so.

Sample Rate

The TurboSound synthesizer can play all sounds at three sample rates: 4182, 8364, and 16728 hz. Remember these frequencies if you are using a hardware sampler to create your own sampled sounds. Fortunately, these are the standard frequencies used by most Amiga products, so compatibility is insured.

If you are running *SuperJAM!* on an accelerated machine, you have the option of running at the higher sample rates. This produces a signal that sounds better, however, each increase in resolution also doubles the overhead on the processor and halves the number of sounds that can be played at once. Use at your discretion.

Change the sample rate by selecting High, Medium or Low from the Sample Rate option in the Preferences menu.

NOTE → SuperJAM! automatically detects what processor you are using and how fast it is. If your computer cannot handle high resolution samples, the High option is permanently dimmed (not available.)

NOTE → When you change the sample rate, it will take SuperJAM a few moments to resynchronize. Do not be alarmed by initially fuzzy or out of tune sounds in the first few seconds after switching sample rates.

Conclusion

With the TurboSound Editor, you can modify any IFF sample and convert it into the TurboSound format for use as a *SuperJAM!* Instrument.

Any IFF sample can be enhanced through the many sophisticated features found in the TurboSound Editor; however, IFF samples brought into the program cannot be saved as IFF files. They become TurboSound files.

TurboSound Instruments can use up a lot of memory if you aren't careful. The TurboSound Editor was designed with memory conservation in mind. Use the editing, effects, and tuning features to create Instruments that are compact in size, yet musical, without destroying the original "flavor" of the samples.

You can assign a different sample to each note within an Instrument.

In the next chapter we will guide you through the process of creating a style from scratch. Stay tuned to this *SuperJAM!* channel. We are going to have some more fun.

Chapter 7

What Is A TurboSample?

In addition to creating your own TurboSound Instruments, you can also generate TurboSamples using *SuperJAM!* TurboSamples are recordings of your *SuperJAM!* performance which can be played either from within *SuperJAM!* or as a stand-alone application.

TurboSamples are useful for achieving high-quality playback which would otherwise be unattainable on computers with low processor speed.

★ TIP ★ Use low sample rate TurboSound Instruments to "sketch" your ideas. Once your music has been finalized, record it as a medium or high sample rate TurboSample for performance playback.

A TurboSample is a digital recording of your *SuperJAM!* performance.

NOTE → For an explanation of sample rates, please see Chapter 6, "TurboSound Technology."

Using TurboSample Files

A TurboSample is useful in several situations:

- When you want to play a *SuperJAM!* composition on a computer that does not have *SuperJAM!* installed
- When you want to use music created with *SuperJAM!* as an accompaniment to a multi-media presentation and are faced with memory limitations
- When your computer is unable to produce high-quality audio output because of its lack of processor speed

A TurboSample is a static recording of your *SuperJAM!* composition. A TurboSample cannot be edited. Therefore, if

you are unhappy with your composition, you must change it in *SuperJAM!*, then re-record it as a TurboSample.

The TurboSample Menu

Once you have created and edited a *SuperJAM!* composition to your liking, you can record a TurboSample.

TurboSamples are recorded from the Song window using its TurboSample menu.

The TurboSample menu contains several options:

- Sample Rate
- Preview Instruments
- Record
- Play
- Load

Let's look at each of these in more detail.

Setting Your Sample Rate

Before you listen to or record your TurboSample, use the Sample Rate option to determine the sound quality. The Sample Rate option features three choices: low, medium and high.

On a computer with a fast processor, you'll want to select High, since this choice yields the greatest fidelity. On slower machines, however, it's best to choose Medium or Low so that *SuperJAM!* can perform optimally while making musical choices for you.

NOTE → The Sample Rate option also controls the sample rate of your TurboSound Instruments. Therefore, for example, when you select High from the Sample Rate option in the TurboSample menu, you will also be setting your TurboSound Instruments to High as well.

If you are running *SuperJAM!* on a computer with low processor speed, you will be unable to achieve high-quality

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audio while composing in real-time. In most cases, to obtain a multi-timbral effect, you will be best served by using the Low sample rate option from the TurboSample menu.

On computers with low processor speed, you might notice that *SuperJAM!* may not play all of the notes in your composition. In addition, the response of your mouse might be very sluggish, further reducing your productivity.

This can present a problem, since you need to hear your composition in full in order to edit and change it. In particular, it is beneficial to listen to each Player's part in its entirety.

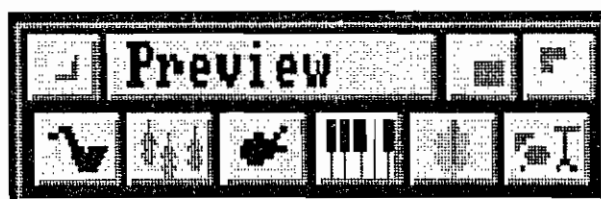
Since *SuperJAM!*'s TurboSound Technology allocates its sample playback on-the-fly, you cannot control which notes *SuperJAM!* is playing at any given time. Because you can record a high-quality TurboSample as your final playback version, this allocation problem only presents itself during the actual composition process.

Previewing Your Mix

The Preview Instruments option presents a method for hearing a specific part or parts of your *SuperJAM!* composition. This way, if your computer does not perform well when using a high sample rate, you can listen to parts of your music individually in order to gain an understanding of your musical arrangement as a whole.

NOTE → The Preview Instruments option is used only when your composition uses TurboSound Technology as its sound source.

The Preview Instruments option of the TurboSample menu accesses the Preview window.



The Preview window includes six Mute buttons, each representing one of your six Band Members. To use this

window, click on the Mute buttons which represent the Band Members you wish to mute.

Muting The Strings And Bass Parts From Your Turbo Sound Composition:

1. Click on the Play button in the Song window to hear your *SuperJAM!* composition.
2. While your song is playing, access the Preview window by selecting the Preview Instruments option from the TurboSample menu.
3. Click on the Mute Strings button, located second from the left. (Notice that you can no longer hear the Strings part.)
4. Click on the Mute Bass button, located second from the right. (Notice that you can no longer hear the Bass part.)

Using the Preview window, you can single out various aspects of your composition and assure that you're getting the results you desire.

Recording A TurboSample

Recording a TurboSample is analogous to ray-tracing a complex object; although the process isn't instantaneous, the results are stunning and professional.

Because a TurboSample plays without putting composing, calculation and processing demands on *SuperJAM!*, it can yield superior audio quality on any Amiga - even a stock A500 with a floppy drive.

Recording A TurboSample:

1. Select the Record option from the TurboSample menu. A file requester appears.
2. Enter the name of your TurboSample after File:, then click on the Return key on your Amiga keyboard or the Save button. The Exporting Performance requester appears
3. The Mute button, located in the middle of the Exporting Performance requester, is always depressed; you cannot unmute your TurboSample performance during the recording process.
4. If you'd like to accelerate the record process, click on the HiSpeed button.
5. To begin recording your TurboSample, click on the Export button. The VU Meters in the Keyboard window and the Measure counter in the Song window will reflect musical activity as your performance is recorded.

6. A horizontal indicator entitled "Creating TurboSample" will then reflect the progress of your recording. When the indicator disappears, the recording process is complete.

Playing Your Turbo Sample From Within *SuperJAM!*

Once you've recorded your TurboSample, you can listen to it by selecting the Play option from the TurboSample menu. Doing so opens the TurboSample Performance indicator.



This indicator displays the name of the selected TurboSample file and overrides the Song window, so that the Start and Play buttons will playback your TurboSample rather than a "live" *SuperJAM!* performance.

NOTE → By default, once you've recorded a TurboSample, the Play option is selected. This way, you can instantly review your recording.

To revert the Song window to its normal playback mode, close the TurboSample Performance indicator by clicking on its close gadget.

Loading A Turbo Sample

You can load a previously recorded TurboSample by using the Load command in the TurboSample menu.

Loading A TurboSample:

1. Select the Load command from the TurboSample menu. The file requester then appears.

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2. Choose the TurboSample by clicking on it, then click on the Load button.
3. If the TurboSample Performance indicator is not already open, it will open and display the name of the newly loaded file.
4. Click on the Start button in the Song window to hear your TurboSample.

Each time you load a TurboSample, it replaces the previously loaded or recorded TurboSample.

NOTE → When you load a TurboSample, it plays back at the sample rate at which it was recorded, even if the Sample Rate option in the TurboSample menu specifies otherwise.

★ TIP ★ If you plan to play your TurboSample from a floppy drive, record it at either the medium or low sample rate. This will preserve disk space and assure correct playback.

Playing TurboSamples Outside Of *SuperJAM!*

In addition to playing a TurboSample from within *SuperJAM!*, you can also play one directly from disk. This way, you can quickly show a friend your latest *SuperJAM!* composition or use ARexx to control a TurboSample in a multi-media presentation.

The TurboSample File Icons

When you record a TurboSample, *SuperJAM!* saves it as a special file on disk. This TurboSample file can then be used to recreate your TurboSample performance without requiring you to use the Song window in *SuperJAM!*

When you examine these files from Workbench, you'll notice that their icons resemble little notes that seem to be speeding by.

The TurboPlayer

In order to play a TurboSample file outside of the *SuperJAM!* composing environment, you must use the TurboPlayer. The TurboPlayer is a program designed especially to play TurboSample files.

When you run the *SuperJAM!* installation program (see Chapter 2, "Installation"), the TurboPlayer is automatically installed with the other *SuperJAM!* program elements. You'll find the TurboPlayer icon next to the *SuperJAM!* icon wherever *SuperJAM!* is installed.

When you double click on the TurboPlayer icon, you'll notice that the TurboPlayer window features the name of the TurboSample file that it's playing as well as a numerical SMPTE display with hours, minutes, seconds, and frames. This is to assist you in coordinating your *SuperJAM!* compositions with other media.

The TurboPlayer functions differently according to which version of Workbench you are using.

Using The TurboPlayer With Workbench 1.3:

-
1. Make sure that your TurboPlayer and TurboSample file are in the same location, e.g., directory, floppy disk, etc.
 2. Double-click on the icon for the TurboSample you want to play.
-

Using The TurboPlayer With Workbench 2.04 Or Higher:

1. Make sure that your TurboPlayer and TurboSample file are in the same location, e.g., directory, floppy disk, etc.
 2. Double-click on the TurboPlayer icon. The TurboPlayer window appears.
 3. Click and drag the TurboSample file icon into the TurboPlayer window.
 4. Click and drag any other TurboSample file icons that you'd like to hear into the TurboPlayer window.
-

NOTE → The order in which you drag the TurboSample files into the TurboPlayer window will determine the order in which they play.

★ TIP ★ If you're using Workbench 2.04 or higher, you can also play TurboSample files without dragging them into the TurboPlayer window. To do so, double-click on the TurboSample file icon. Remember, however, that the TurboPlayer must be located in the same directory as the TurboSample file which you are playing.

Playing From A Floppy Disk

Because of speed and space limitations, a floppy disk drive can only play TurboSamples which were recorded at either a medium or low sample rate.

At a medium sample rate, a floppy disk can hold 1½ minutes of music, while at a low sample rate, the disk can hold 3 minutes of music.

NOTE → The lower the sample, the poorer the sound quality.

Take the following steps when playing a TurboSample from a floppy disk:

Playing A TurboSample From A Floppy Disk:

1. Double-click on the floppy disk icon to reveal its window. The TurboSample file icon will appear in the window.
 2. Drag the TurboPlayer icon into the floppy disk's window.
 3. Double-click on the TurboSample file icon to hear it play.
-

Technically, you can also drag the TurboSample file icon into the TurboSample window.

Using ARexx

If you are using the *SuperJAM!* in conjunction with a multi-media presentation and/or wish to have another program control the playback of TurboSample files, you can use ARexx commands to control the TurboPlayer.

These commands are identical to the standard Bars&Pipes ARexx commands found in the ARexx Accessory included with this program.

NOTE → For a detailed listing of ARexx commands, please see the ReadMe file called "TurboPlayer and ARexx" located next to the TurboPlayer icon.

Chapter 8

Why Use Midi?

Although TurboSound Technology offers you the opportunity to create multi-timbral arrangements on your Amiga, it can't compete in sound quality with even the least expensive MIDI instruments. The Amiga's sound architecture, you see, is capable of playing 8-bit samples, while most MIDI equipment uses a more modern 16-bit sound technology to produce higher quality results.

Our number one choice for serious *SuperJAM!* users is MIDI because it offers better fidelity, coupled with an enhanced capacity to play a multitude of instruments simultaneously.

Another benefit of using MIDI over TurboSound Technology is that using MIDI does not interfere with or consume your computer's processor speed. As a result, *SuperJAM!* will operate unencumbered by the demands of real-time sample processing. Screens will refresh faster, commands will respond more quickly to your mouse strokes and *SuperJAM!* will run optimally.

To sum it up, *SuperJAM!* really comes to life when used in conjunction with even the simplest multi-timbral MIDI device.

Midi Functions In The Band Window

The Band window provides several MIDI functions to give you complete control of your MIDI instruments. These features include:

- Channel number control
- Program change selection by name or number
- MIDI volume adjustment
- Volume to velocity mapping
- Preset Band configurations

- Drum map assignment

Use these functions to control and assign various elements to your Band Members,



Setting Up Your Midi Band

By default, *SuperJAM!* is set to run using TurboSound Technology. Once you configure *SuperJAM!* to your specifications, it will boot up according to your preferences from then on.

To configure the Band to play via MIDI, first open the Band window, which can be accessed from the following windows:

- Keyboard window
- Section window
- Snapshot Grid window
- Pattern Grid window
- Styles window



In each case, the Band window is accessed by clicking on the Band button found in the above-mentioned windows.

NOTE → The Keyboard, Styles, and Pattern Grid windows share the same Band, while each Section window (and its associated Snapshot Grid windows) has its own Band. This way, each Section in a Song can have a different set of Instruments playing.

The following is a brief outline of steps typically taken when setting up a Member (Player) of your MIDI band. Let's take a look at these quickly, then delve into detail later in this chapter.

To Set Up Each Player In The Band Window:

1. Set the MIDI/Speaker button so that it reveals a MIDI icon.



2. Set the MIDI channel.
 3. Set your MIDI patch (instrument.)
 4. Adjust the octave of your selected instrument.
 5. Set the volume.
 6. Save your configuration to disk.
-

Using The Band Window For Midi

The MIDI/Speaker button determines whether the Player performs with TurboSounds or via MIDI. If you select MIDI, the two buttons to the right of the MIDI icon display the MIDI channel and patch numbers.

Selecting A Midi Channel

Click down on the blue numbered button and select the desired MIDI channel from the pop-up menu.

NOTE → If you set two players to perform on the same MIDI channel, they will always play the same instrument and at the same volume (even if you set different values for each.) Unless you are limited by your MIDI equipment, always set a different MIDI channel for each Player.

The Midi Patch Button

To the right of the MIDI Channel button, you'll find the MIDI Patch button. This button displays either the MIDI patch (program change) number, or the specific name of the patch.

If the MIDI Patch button displays a number, click down and drag the mouse to scroll the value up or down. If the MIDI Patch button displays a name, click down and a pop-up

scrolling menu will appear beneath the mouse. Then drag the mouse to the desired patch name and lift up to select it.

Adjusting The Octave

Once you've selected a patch for your Player, you may find that it's too high or low in pitch. To raise the pitch in octave intervals, click on the Octave Up Arrow button. Each time you click on it raises your instrument an additional octave. The Octave Down Arrow button works in the same manner, instead lowering the pitch by an octave each time.

NOTE → To reset your Instrument's octave to its original setting, click on the Octave Down Arrow buttons one time for every octave that the instrument has been raised or click on the Octave Up Arrows for each time the octave has been lowered.

Example:

If you've raised your Tuba patch by two octaves, click on the Octave Down Arrow twice to bring the instrument back to its original range.

When your instrument is in its original octave, the Octave Up and Octave Down arrows will be black.

Setting The Midi Volume

Set the MIDI volume by dragging the Volume slider on the far right. This sends a MIDI controller (control change #7) event to set the volume.

Most MIDI instruments receive this type of event; however, if your synthesizer does not respond to the Volume slider, you can also tell *SuperJAM!* to convert volume to note velocity. (More on that later.)

SuperJAM! provides additional MIDI setup features in the Patch window. Click on the Player button to the left of the MIDI/Speaker button to open the Patch window.

Managing Program Change Information

At this point, we should explain a little about MIDI patches and patch names. The MIDI command that selects a particular sound, or instrument, is called a Program Change event. This command lets you choose between 128 instruments, or "patches." MIDI itself, however, places no requirement on the relationship between the MIDI program change numbers and the patches they select.

Example:

An ElectroHot synthesizer assigns its Organ sound to program change #1. The WaveMaster, on the other hand, designates program change #1 as a violin. When you choose program change #1, you'd get a different resulting instrument, depending on the type of synth you're using.

The Patch Name List

To organize each of your MIDI instruments properly, we've included a feature that catalogues each instrument according to patch name and synthesizer type. This is called the Patch Name list.

A Patch Name list for the ElectroHot synthesizer would have the name "Piano" for program change #1, while the Patch Name list for the WaveMaster synth would list the violin as program change #1.

The top button in the Patch window is the Patch Name button. The Patch Name button displays the currently selected instrument by name.

If you haven't installed a Patch Name list, the Patch Name button is empty. If you have installed a Patch Name list, the button reveals the selected instrument by name. To reveal a scrolling pop-up list of patches, click down and hold on the Patch Name button. Drag the mouse to choose an instrument.

The Patch Name Menu

Use the Patch Name menu to load, save, and arrange your Patch Name list. It provides the following commands:

- **CLEAR**: Erases the current Patch Name list.
- **LOAD**: Loads a Patch Name list from disk.

NOTE → SuperJAM patch name files are compatible with Bars&Pipes Professional Super Setup patch name files. Use them interchangeably.

- **SAVE**: Saves the current Patch Name list to disk. Once you've created a Patch Name list, you must save it in order to use it again.
- **SELECT**: Selects from currently loaded Patch Name lists. A scrolling list appears under the mouse. To choose a list, move the mouse to your choice and lift up.
- **EDIT**: Opens the Patch Name requester. This is where you create your own Patch Name list.

Creating A Patch Name List

Creating a Patch Name list will ultimately save you a great deal of time. Once your instruments are organized, you can set up your Band quickly and easily.

Creating A Patch Name List:

1. Select a patch number by typing after the Patch: prompt or clicking on the up and down arrows.
2. Enter the patch name after the Name: prompt.

3. After you enter the name, press the return key and the requester automatically prompts you for the next patch.
 4. When you have finished, click on the Okay button to close the requester.
-

Other Patch Controls And Options

Directly beneath the Patch Name button is the Patch Number slider. Drag this left or right to scroll through the 128 possible MIDI patches. As it scrolls, it demonstrates each patch.

To hear the currently selected patch, click on the Test button.

If your MIDI instrument does not respond to the Volume slider, it probably was not designed to respond to the MIDI Control Change #7 volume command. You can work around this by clicking on the Volume->Velocity button. With this enabled, *SuperJAM!* modifies each note's velocity to reflect the volume, while retaining the original dynamic fluctuations reflected in each note's velocity.

NOTE → Some MIDI instruments, in particular the *Miracle* piano from The Software Toolworks, Inc., share just one volume command across all MIDI channels. As a result, even though you may notice that the Volume sliders work, all the Players' volumes change when you drag the volume of just one Player. This makes it impossible to set individual volumes. In such a situation, use the Volume->Velocity button.

Once you've finished with the MIDI Patch window, close it by clicking on its Close Window gadget.

★ TIP ★ While you work in the MIDI Patch and Band windows, keep the SuperJAM performance running so that you can hear how your changes sound interactively.

Saving Your Midi Configuration

Once you've set up all of your MIDI instruments, you may wish to save your configuration for later use. Use the Band Menu Save and Load commands to save your setup to disk; then retrieve it at a later date.

Not only do different MIDI instruments arrange their patches differently, but many set up their drums to play from different notes. The relationship of each MIDI note to a specific beat is called a drum map. We won't get into this in detail now since there's a whole chapter dedicated to the subject near the end of this manual; however, you can load and save the drum map for the Drum Player with the second menu in the Band window, the Drums menu.

Chapter 9

Introduction

By now, you are familiar enough with *SuperJAM!* to understand the deeper levels of creativity and control that *SuperJAM!* provides.

Even if you are quite content with creating a Song by working with the supplied Styles, you will find it beneficial to read this and the following chapters.

This chapter is a quick overview. It puts all of the elements of Style in perspective so that you will have the requisite knowledge when you launch into creating your own Styles.

Musical experience and an understanding of music theory are very helpful in building your own Styles; however, you can always learn by studying existing Styles.

We'll study the construction of a Style by listening, observing, and isolating its components.

Examining A Style

In order to perform a particular Style, *SuperJAM!* needs to know what notes to play when. *SuperJAM!* stores this information in a Pattern. In its simplest form, a Pattern is a very short recording of notes that plays repeatedly.

Example:

1. Select any Style in the Keyboard window.
2. Click on the Play button.

3. Listen to it. Do not click on any chords. Do not change anything. Just listen. Notice how the music repeats the same Pattern. That's it! A Pattern is a segment of music that plays over and over.
4. Notice though that some notes change subtly. *Super-JAM!* seems to be playing ever-changing Variations of the Pattern. Ah ha! A Variation is one of many versions of the Pattern. By using Variations, the Pattern is capable of sounding slightly different every time it plays.

A Pattern is a segment of music that plays repeatedly. Each Pattern can be broken down into subpatterns, or Variations, that describe subtle changes in the Pattern every time it plays.

Six Band Members

A Pattern must also describe which Band Member, or Player, plays each particular note.

Example:

-
1. With the Style still playing, click on the Band button in the Keyboard window to open the Keyboard window's Band.
 2. Drag all of the Volume sliders to the left to silence the Band.

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3. Drag the Drum Volume slider to the right. Listen to the Drum part of the Pattern. Drag the Volume slider to the left again.
 4. One by one, drag the Volume sliders of each Player and listen to it perform its part of the Pattern. Some Players may not play at all in the Pattern. Some may have more Variations than others. Certainly, each Player has a unique part in the Pattern.
 5. Drag all of the Volume sliders to the right and close the Band window.
-

As you can see, a Pattern is really composed of six looped recordings, one for each Player.

Sixteen Variations

To maintain a live, natural sound, each Player performs from one of many Variations of the recording. In fact, *SuperJAM!* provides 16 Variations for each Player. Each Player chooses a Variation at random. The Drum Player may play its Variation number 3, while the Guitar Player plays its Variation number 12.

In summary, a Pattern is composed of six Players, each playing one of sixteen Variations. That's $16 \times 16 \times 16 \times 16 \times 16 \times 16$, or just over sixteen million possible combinations! No wonder *SuperJAM!* never plays the same thing twice!

Special Occasions

Sometimes the Style needs a different Pattern just for a special occasion:

Example:

-
1. Click on the Play button in the Keyboard window. Listen to *SuperJAM!* perform the Style.
 2. Click on the Fill button (the paint can.)
 3. Listen to the Fill Pattern.
-

The easiest way to perform Fills, Intros, Breaks, and Ends is to play a special recording of each. That's exactly what *SuperJAM!* does. Each Style can have a special Pattern dedicated specifically to each type of musical Embellishment, i.e., Fill, Intro, Break and End. Once again, each of these Patterns has six Player parts, each of which has sixteen Variations.

Chords And Patterns

Sometimes, when the music performs rapid chord changes, it makes sense to use a Pattern designed to play such rapid chord changes. On the other hand, if the music sticks with one chord throughout each measure, a Pattern that is less active may be more desirable. Every Pattern specifies how much chord activity it can handle, from three levels:

- Chord changes on any beat.
- Chord changes on every other beat.
- Chord changes only at the start of measures.

Usually, a Pattern specifies all three levels. However, some sophisticated Styles use two or three Patterns. One Pattern in a Style may handle a chord on every beat, while a second Pattern performs the other two options.

THE ELEMENTS OF STYLE

Each Pattern specifies which special Embellishments it supports as well as how much chord activity. That covers just about everything, except for one critical issue:

Moving From Chord To Chord

What happens when you play one chord and then another? *SuperJAM!* plays two distinctly different sets of notes!

The answer to this question is probably the single most difficult concept you'll learn in your study of *SuperJAM!*. However, it's invaluable if you want to create realistic Styles.

SuperJAM! is designed to think the way an accomplished musician thinks. Let's use a hypothetical situation to illustrate this point. Instead of *SuperJAM!*, we have Esther at the Organ Bar, following our every instruction.

Example:

-
1. We ask Esther, "Please play a Boogie Woogie Style, in the key of 'C' major, and start with a 'C' chord."
 2. Esther starts banging away. Great! Sounds like a Boogie Woogie "C" chord played in "C" major.
 3. We then ask Esther, "Play us an 'F' chord." She does, and it sounds wonderful. We ask her to play a few other chords. They all sound just right.

4. How does she do it? Does she have every single chord possibility memorized? Let's ask her... "Okay, Esther. Stop. When we asked you to play that 'G' Major chord, what did you do?"
5. Esther looks thoughtful and replies, "Well, I know what a 'G' Major chord is, and I know how to play Boogie Woogie. So, I moved my hands into the right position to play the 'G' Major chord. Then I just played Boogie Woogie from there.
6. When you asked me to play a 'D' minor chord, I moved my hands into the 'D' minor position and continued to play Boogie Woogie."
7. So that's how she does it! She knows by heart how to play the rhythm, or Pattern, of Boogie Woogie Style. When we ask her to play a specific chord, she applies that rhythmic Pattern to the chord.

...And that's how *SuperJAM!* does it. Each *SuperJAM!* Style memorizes how to play any chord, not how to play every specific chord. When you instruct *SuperJAM!* to play a chord in the current Style, it positions its binary fingers over the chord and plays the rhythm of the Style, just like Esther does.

THE ELEMENTS OF STYLE

This explains why *SuperJAM!* must have a chord selected in order to perform. Without a chord selected, it doesn't know where to "position its binary fingers."

So, a Pattern does not describe literally what notes to play. Instead, it describes how to play the notes, given any chord.

The following example illustrates the relationship of the chord and the Pattern.

Example:

-
1. If *SuperJAM!* is performing, click on the Stop button to halt the performance.
 2. Click on any chord in the Keyboard window. Listen to it.
 3. Click on the Play button. Listen to *SuperJAM!* play the chord. Notice how the tonality of the chord is conveyed into the performance.
 4. Click on the Stop button and repeat the last two steps for several different chords. Try different chord types. Notice that when the tonality of the chord changes, the tonality of the performance changes, but the rhythmic nature of the Pattern stays the same.
-

To reiterate, a *SuperJAM!* Pattern stores the rhythmic information that describes how to play a chord, but does not store the actual notes of a particular chord, because it could be asked to perform any chord.

This creates a problem: How do you describe the method for playing a chord to *SuperJAM!* if you don't know what

the chord is? And, while you design the Pattern, how do you know what it sounds like melodically, if it's just a rhythm without a chord?

The answer is that we must arbitrarily choose a chord and record the Pattern as it would be played for that chord. We tell *SuperJAM!* about the chord, so it is able to decipher how the Pattern is played relative to the chord. It can then store this information and use it to play any other chord via the same Pattern. The key point is that *SuperJAM!* can correctly analyze a Pattern and recreate it for any chord, if, and only if, it knows within what chord the Pattern was played in the first place.

The last point will be important to remember when you start creating your own Patterns.

★ TIP ★ This is heady stuff. If it doesn't make sense now, fear not. Later, try looking at the structure of existing Styles. Then reread this section to better understand the mechanics.

Putting It In Perspective

- A Style is composed of several Patterns. Each Pattern is a looped performance that can play over and over. Typically, Patterns are one or two measures in length.
- The Pattern stores the music not as a direct recording, but as rhythmic information that describes how to play any given chord.
- Some Patterns play the regular pieces of the Style (the "groove") while others play the music during a Fill, Break, Intro, or End.
- A Pattern specifies how much chord change activity it can handle.
- A Pattern is composed of six musical parts, one for each Band Member, or Player.

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- Each Player performs up to sixteen Variations. A Variation is a subtly changed version of the Pattern. Variations give *SuperJAM!* its constantly changing sound.

In the next chapter, you are going to analyze a Style. We are going to introduce you to the process of creating and editing Styles by taking another tour.



Chapter 10



Objectives

The fastest way to understand how to create styles is to analyze a Style supplied with the program.

NOTE → In the last chapter, we discussed the components of a Style. If you haven't read it yet, please do.

In this chapter, we will select an existing Style and view these components in action.

The Styles Window

Let's start with a clean slate. Remove all open windows except for the Keyboard window.



Click on the Styles button in the Quick Strip at the top of your screen. The Styles window appears loaded with the list of currently installed Styles. The list displays each Style by name and time signature.

Notice that you can play any Style from the Styles window. Select a Style by clicking on it, then press the Play button. The Play button in the Keyboard window activates simultaneously.

We'll take a tour through one of the Styles supplied with *SuperJAM!*, 12-8Ballad.

If 12-8Ballad is not currently installed in the Style list (it should be near the top,) install it by selecting the Load command from the Style menu.



The Style Menu

While we're at it, let's take a look at all of the commands in the Style menu:

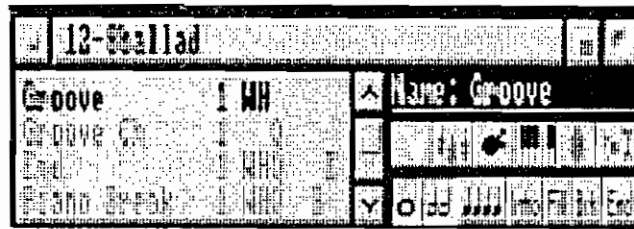
- **NEW**: Creates a new, blank Style and opens the Individual Style window so you may start building the Style. Once you've entered Patterns into the Style, be sure to save it to disk. Otherwise, it won't be available the next time you run *SuperJAM!*.
- **LOAD**: Reads a Style from disk and installs it in the Style list permanently. Every time *SuperJAM!* runs, it loads the Style.
- **SAVE**: Saves the selected Style to disk. Also remembers where it saves the Style, so that the next time *SuperJAM!* runs, it will load the Style from the saved location.
- **DUPLICATE**: Creates a copy of the currently selected Style. Use this to create a new Style by copying, then altering, an existing Style. Be sure to save the new Style to disk before closing *SuperJAM!*.
- **REMOVE**: Removes the selected Style from the Style list. From now on, this Style will not load every time you run *SuperJAM!*
- **INFO**: Opens a text editor with information about the currently selected Style. Most Styles come with advice on how to use the Style, including recommendations for tempo and Band instruments. You may open the editor and add any information you'd like.

Now that you've installed 12-8Ballad, listen to it by clicking on the Play button in the Styles window. Adjust the tempo by clicking on the Tempo button and dragging it up or down. Once again, notice that the Tempo and Play buttons in the Keyboard window reflect your actions.

NOTE → This demonstrates that the Styles window can also control the performance in the Keyboard window. For example, if you click on the Band button in the Styles window, the Band window opens with the name "Keyboard," indicating that the Styles window uses the same Band as the Keyboard window. This feature lets you test-drive different Styles via the Keyboard window.

The Individual Style Window

Double click on the name 12-8Ballad. The Individual Style window opens. Notice that the window displays the Style name, 12-8Ballad, in its title bar.



The Pattern List

As we discussed in the last chapter, a Style is composed of Patterns, each assigned to a particular musical mode, like Fill, Break, and Intro. The list box occupying the left half of the window displays the Patterns. To the right of each Pattern name, it displays the Pattern length in measures, and several indicators that define where in the performance to use the Pattern:

- "W" Use Pattern on measures with chords only on first beat.
- "H" Use Pattern when chords on every other beat.
- "Q" Use Pattern when chords on every beat.
- "I" Use Pattern to perform Intro command.
- "F" Use Pattern to perform Fill command.
- "B" Use Pattern to perform Break command.
- "E" Use Pattern to perform End command.

Notice that "Groove" has W and H selected, while "Groove Ch" has Q selected. This tells *SuperJAM!* to play "Groove" whenever the chord changes are sparse and regularly spaced, and "Groove Ch" whenever there are rapid chord changes.

Also notice that the two Groove Patterns have no special commands set. *SuperJAM!* plays these Patterns by default.

The remaining Patterns all have WH and Q set, indicating that they can be used no matter how dense or sparse the chord changes. Notice that each of these has one of the command flags set. "End" plays whenever the End command is set in a section. "Piano Break" plays when the break flag is set. "Drum Fill" and "Drum Intro" perform during the Fill and Intro commands, respectively.

NOTE → The names given to each Pattern are purely up to you. A break Pattern need not be named "Piano Break," nor should it always concentrate on the Piano part. The designer of 12-8Ballad decided to put the emphasis on the Piano during the Break; he named the Pattern accordingly.

SuperJAM! does not require you to provide a Pattern for every command, however, the more you add, the more versatile your Style becomes.

Name, Length And Players

All of the Patterns in 12-8Ballad are just one measure in length. Patterns may be longer in length, but there must always be at least one one-measure Pattern in every Style.

Click on any Pattern to select it. To the right of the list, the window displays information pertaining to this Pattern. You may change the name of the Pattern by clicking and typing after the Name: prompt. Use this feature to provide descriptive names for your Patterns.

Below the Pattern name are the six Player buttons. These open the Pattern Grid window for each Player.

Usage Indicators

Underneath the Player buttons are the seven indicators that determine how to use the Pattern. The whole note (the "W" flag) indicates that this Pattern can be used on measures that have chords only on the first beat. The two half notes ("H") indicates that this Pattern may be used on Patterns that have notes on even beat boundaries. The four quarter

notes ("Q") indicates that this Pattern may be used where there is chord activity on any beat. The remaining buttons select which commands the Pattern is capable of performing.

NOTE → Although its button displays four quarter notes, the "Q" option really refers to every beat. If you design a Style with a higher beat resolution, for example eighth notes, this option refers to chord changes on eighth note boundaries. SuperJAM does not allow chord changes to occur more frequently than the beat resolution.

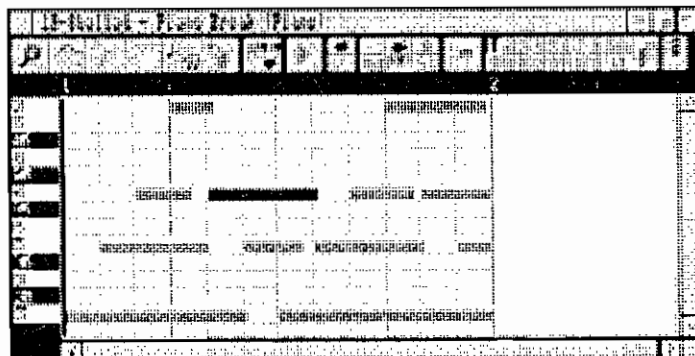
Change a Pattern's capabilities by clicking on any of these buttons.

The Pattern Grid

Let's examine one of 12-8ballad's Patterns to see what makes it tick.

A Style does not necessarily use all 6 Players. In fact, 12-8Ballad uses only 5 of them: Drums, Bass, Piano, Guitar, and Strings. Many Styles use only four Players.

Let's study the Piano part of the "Groove" Pattern. Click on "Groove" in the Pattern list, then click on the Piano button to open the Pattern Grid window.



Before we go any further, notice the title of the window:

12-8Ballad - Groove (Piano)

SuperJAM! displays the Style name, Pattern name, and Player in the title bar of the Pattern Grid window, so you know exactly what you are working with.

Viewing The Pattern Grid

You've seen the Pattern Grid before, possibly as the Snapshot Grid. It's very similar in function and layout to the Snapshot Grid, with the addition of extra buttons and menu commands to support Style design.

The Pattern Grid displays the performance in a piano roll-style grid. The Pattern Grid displays the piano keys down the left edge of the window as a reference. Across the top, it displays the time reference as measure numbers subdivided by beat markers. It displays notes as blue bars, the vertical position denoting pitch and the horizontal position denoting time. The height of each note indicates the note's velocity (similar to volume,) while the width of the note indicates its duration.

Grid Resolution

Notice that the resolution of the Pattern Grid boxes is even finer than the beat markers. Each box is the smallest resolution described by the Style. Usually, this is an eighth or sixteenth note. (In this case, 12-8Ballad, a sixteenth note.) Vertically, each box is a different note in half steps up or down the scale. Each note is placed in a box. If the note's duration is longer than a box, it may fill several boxes.

Count the boxes from left to right and you will see that this Pattern has 4 beats per measure and 4 grid boxes per beat, totalling 16 boxes per measure.

One of the notes may be red. The red bar indicates the last note that was edited.

Drag the scroll bar to the right of the Pattern Grid to view higher or lower pitches. Drag the scroll bar under the Pattern Grid to view the Pattern at different points in time.

Grid Buttons

Click on the Zoom In button to see the Pattern Grid in greater detail; click on the Zoom Out button to see more notes at once.

The Pattern Grid has one Play button. Click on it to start. It turns into a Stop button, which you may click again to stop the performance. The Pattern plays continuously, looping back to the start, until you stop it.

Setting Up Your Performance

Use the Perform menu to select which Players actually perform. The Perform menu displays each Player with a checkmark by it if it is currently active. Select a Player in the Perform menu to turn it on or off.

Select the Solo option in the Perform menu to turn all Players off except for the Player you are editing.

The Variation Buttons

As we discussed in the previous chapter, each Pattern has sixteen Variations. Each Variation represents a slightly different version of the Pattern.

The sixteen numbered buttons in the top right represent the sixteen Variations. The Pattern Grid displays only the notes belonging to the Variations you select. Select a Variation by clicking on its button. Notice that you can select several Variations at once.

Examining Variations:



1. Click on the Solo button. This forces the Pattern Grid to display and play only one Variation at a time.
2. Click on the Play button.

3. Click on Variation 1. The notes you see in the Pattern Grid comprise Variation 1. Watch the Pattern Grid and listen to the notes play. To see more, you may drag the right scroll bar while the Pattern plays.
4. Click on Variation 2. This Variation has a different note Pattern. It looks and sounds different from Variation 1. Click on Variations 3 and 4. Each is unique.
5. Click on Variation 5. The notes look and sound the same as Variation 4. In fact, Variation 5 is identical to Variation 4. Each Variation need not be unique. It depends on the needs of the Style. Some Styles need many more Variations than do other Styles.
6. Select Play In Random Order from the Variations menu. the Pattern Grid randomly chooses a different Variation for each pass through the Pattern. Watch the notes and listen. This is exactly what *SuperJAM!* does when it performs.

7. Click on the All button. This selects all of the Variations at once. Every note in every Variation plays at the same time.
 8. Click on the All button a second time, deselecting it. This turns off all Variations and the Piano Player is silent.
 9. Click on the Stop button.
-

Each Variation is not composed of a unique set of notes. This would require too much memory and too much work on your part when creating a Style.

Instead, any note may belong to one or more Variations. For this reason, the Pattern Grid lets you view several Variations at once. This makes the entire process of creating a Pattern with Variations amazingly quick and easy. Here's how you might do it:

Example:

1. Start by enabling all Variations and entering the basic Pattern for the Style. This provides the backbone of the Style, the Pattern that identifies it as 12-8Ballad, not Boogie Woogie.
2. Then, select different groups of Variations and add notes specific just to those Variations.

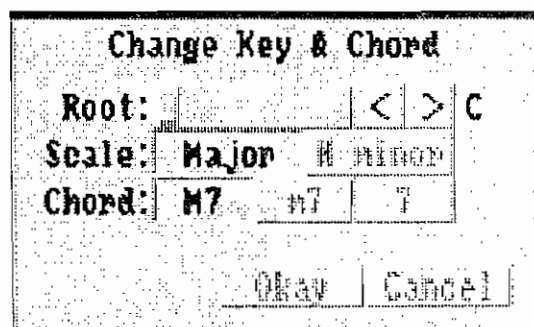
3. Finally, step through each individual Variation and add subtle enhancements. These last two steps add the nuances that guarantee the Style sounds "live" every time it plays.

The Pattern Key & Chord Settings

As we discussed in the last chapter, *SuperJAM!* stores the Pattern not as a specific set of notes to play, but as a rhythmic pattern that describes how to play any given chord. In order to edit this Pattern, however, we need to be able to hear it in the presence of a chord. So, we decide on a specific chord and use that while creating and editing the Pattern. As it turns out, *SuperJAM!* also needs to know in what key signature you want to work, because, as you've probably noticed, the Pattern often includes notes that are not within the chord.

When you first create a Pattern, *SuperJAM!* asks you to specify the key signature and chord that you will use to enter the Style. Since 12-8Ballad is not a new Style, this has already been established. View the key and chord settings by selecting the Set Pattern Key & Chord command in the Style menu.

The Change Key & Chord requester opens.



The Root: slider determines the root note of both the key signature and the chord. The Scale: buttons select which

scale to use, Major (happy face) or Harmonic Minor (sad face.) The Chord: buttons select which chord, a Major 7, Minor 7, or Dominant 7, to use. You may wonder why your only choices are 7th chords. 7th chords, which are composed of four notes, include as a subset the simpler three note triads. Any Pattern created with 7th chords in mind will work for both, whereas the reverse is not true.

The designer of 12-8Ballad chose the scale of "C" Major and the "C" Major 7th chord.

Click on the Cancel button to close the requester.

Study the notes in the Pattern Grid. Check each against the piano roll on the left side. Notice that all of the notes land on "C", "E" or "G". The notes in the "C" Major 7th chord are "C", "E", "G", and "B". So, the Pattern is comprised entirely of notes within the chord. For successful Style construction, you must concentrate on notes within the chord. Notes outside the chord provide melodic embellishment, while notes within the chord provide the framework of the tonal structure.

Since *SuperJAM!* requires you to enter your Patterns all in one chord and key, you may desire to test the Pattern in other chords and key signatures as you design it.

Testing Your Pattern

1. Select Test Chords in the Style menu.
2. Click on the Play button in the Pattern Grid.
3. Click on the Keyboard button in the Quick Strip to bring the Keyboard window to the front.
4. Click on a chord in the Keyboard. Notice that the note Pattern performs the chord.

5. Try several different chords. Notice that the notes play whatever chord you choose, regardless of whether it's major or minor. If you choose a 7th chord, the top note of the chord does not play. This is because the Pattern does not have a note recorded for the top of the chord. (If it did, it would be a "B".) Still, it sounds right.
 6. Click on different Variations. See how each plays the chord.
 7. Click on the Stop button and deselect Test Chords from the Style menu.
-

Variation Choice



Click on the Variation Choice button just to the right of the Solo and All buttons in the Pattern Grid window.

The Variation Choice window appears. From the title bar, you can see that this window is associated with "Groove."

Although we affectionately refer to this window as "The Mother of All Windows," do not be intimidated. This window is necessary only for the more complex Styles. Fortunately, most Styles that you create will probably not use this feature.

Groove												
	Copy	Clear	Set	Invert	Remaining	Combinations						
1:	I	II	III	IV	V	VI	VII	b/7	MaJ	min	other	->I ->V
2:	I	II	III	IV	V	VI	VII	b/7	MaJ	min	other	->I ->V
3:	I	II	III	IV	V	VI	VII	b/7	MaJ	min	other	->I ->V
4:	I	II	III	IV	V	VI	VII	b/7	MaJ	min	other	->I ->V
5:	I	II	III	IV	V	VI	VII	b/7	MaJ	min	other	->I ->V
6:	I	II	III	IV	V	VI	VII	b/7	MaJ	min	other	->I ->V
7:	I	II	III	IV	V	VI	VII	b/7	MaJ	min	other	->I ->V
8:	I	II	III	IV	V	VI	VII	b/7	MaJ	min	other	->I ->V
9:	I	II	III	IV	V	VI	VII	b/7	MaJ	min	other	->I ->V
10:	I	II	III	IV	V	VI	VII	b/7	MaJ	min	other	->I ->V
11:	I	II	III	IV	V	VI	VII	b/7	MaJ	min	other	->I ->V
12:	I	II	III	IV	V	VI	VII	b/7	MaJ	min	other	->I ->V
13:	I	II	III	IV	V	VI	VII	b/7	MaJ	min	other	->I ->V
14:	I	II	III	IV	V	VI	VII	b/7	MaJ	min	other	->I ->V
15:	I	II	III	IV	V	VI	VII	b/7	MaJ	min	other	->I ->V
16:	I	II	III	IV	V	VI	VII	b/7	MaJ	min	other	->I ->V

This is one aspect of Style design that we kept out of "Elements of Style" so that you wouldn't suffer from information overload.

An Explanation

Some Styles require different Variations for different chord types. For example, a particular Pattern may sound great when played on a major chord, but out of place on a minor chord. The Variation Choice window determines which Variations may be used for which chords. By default, the Variation Choice window for each Pattern has all Variations set to accept all chords, so that you can create Styles without ever opening this window.

When *SuperJAM!* prepares to play a new chord, it scans the Variation choices to find the Variations that satisfy the chord. It then randomly selects from the acceptable Variations.

Touring The Variation Choice Window

The Variation Choice window displays the Variation numbers down the left hand column. Each Variation is followed by a strip of buttons indicating for what this

Variation may be used. If the button is depressed (red,) the Variation is enabled for that particular use.

The first seven buttons represent the intervals of the scale (i.e., Do, Re, Me, Fa, So, La, Ti) as roman numerals. If the chord is based on one of these intervals and the corresponding button is enabled, the Variation is accepted. The ""B"/#" button refers to all chords outside of the scale (the "black" notes.)

The next three buttons refer to chord types. If the lower three notes of the chord are a Major triad, the "Maj" button must be enabled. If the lower three notes are a Minor triad, the "Min" button must be enabled. For all other chords, the "Other" button must be enabled.

Finally, the last two buttons, "->I" and "->V" indicate that this Variation may be used if the current chord is leading into a chord based on either a I or a V.

We chose 12-8Ballad for this tour because it uses the Variation choices. Let's look at some of them:

Variation 1 has intervals I, II, and accidentals ("B"/#) enabled. It also accepts all three chord types (Maj, Min, and Other,) but not chords leading to I or V. *SuperJAM!* chooses this Variation only if it is playing a chord of any type based on the I, II, or any accidental of the scale. For example, in the scale of "C" , only "C" and "D" chords, along with all out of key chords, may be played by Variation 1.

Variation 2 has intervals V, VI, VII, and accidentals enabled. It accepts all chord types. In the scale of "C" , this Variation can play "G", "A", and "B" chords, along with out of key chords.

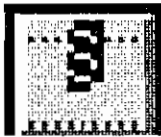
Variation 3 is similar, but supports "E" and "F" chords.

Variation choices apply to all Players in a Pattern. Once you've set up the Variation choices for the Piano Player, the same rules apply to all other Players.

Melodic And Harmonic Control In The Pattern Window

Two additional buttons allow you to control the way *SuperJAM!* musically interprets your Patterns. They are the Inversion and Purpleizer buttons.

The Inversion Button



The last button to the right of the Variation Choice button is the Inversion button. Although you cannot see the results of this feature when you turn it on, you can hear it when you play the Style.

When *SuperJAM!* plays the Pattern, it may play the chord notes higher or lower, depending on the position of the chord. For some Players, like the Bass and Melody, this makes sense. But the chord parts (Piano, Guitar, and Strings) usually sound better if they are restricted to a narrower range. The Inversion button restricts the range of notes to the maximum range of notes in the Pattern. This is usually about one octave. *SuperJAM!* restricts a note to the inversion range by increasing or decreasing its octave.

NOTE → I2-Ballad does not use the Inversion button for the Piano part. The arpeggiated performance might not sound right if it jumped or dropped an octave at the wrong point. Instead, it has special Variations designed for different ranges and uses the Variation Choices to insure that the appropriate Variations are used for the correct chords. This is a sophisticated solution, however, that you will rarely need.

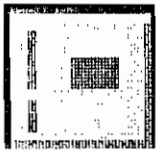
By default, *SuperJAM!* turns on the Inversion button for Piano, Guitar, and String parts. Click on the Guitar button and *SuperJAM!* replaces the Piano Grid with the Guitar Grid. Notice that the Inversion button is on for the Guitar Player. Let's stay in the Guitar Grid...

The Purpleizer Button

Notice that the notes the Guitar Player performs are "G", "B", and "E". Remember, the Pattern was written in the chord "C" Major 7, which is "C", "E", "G", and "B". The Guitar notes all belong to the chord. However, the "B" is

the 7th note of the chord. (You might also think of it as the fourth note in the chord.) If you select a triad chord (which is only three notes) in the keyboard, *SuperJAM!* won't play the "B", since it's above the top of the triad. It will play the "G" and the "E", because they map into members of the triad. *SuperJAM!*'s doing the right thing. This feature allows you to define your Patterns for 7th chords, yet *SuperJAM!* will play either 7s or triads, whichever is appropriate.

But what happens if you want *SuperJAM!* to play that "B"? Bass and Melody parts often walk through the upper notes. If the chord is only a triad, these notes are dropped, because *SuperJAM!* assumes you don't want to hear them, since you chose a smaller chord. We need to be able to say, "Play this note regardless of the chord."



Enter the Purpleizer. The Purpleizer button is located just to the left of the Variation buttons. When the Purpleizer is activated, any note you touch with the mouse turns purple (or gray, while highlighted,) indicating that this note should always play. It doesn't matter in what editing mode you may be, be it the Pencil, Wand, or Hand or none at all. Just touch the mouse to the note. In addition to the regular operation of the mouse mode, the note becomes purpleized.

For example, you can turn the Purpleizer on before you enter notes. Every note then entered will be Purpleized until you turn the feature off.

NOTE → There's a menu command that echoes the Purpleizer button. Called "Always Play Selected Note," it resides in the Style menu. When the Purpleizer is activated, so is the menu command, and vice versa. This helps clarify the purpose of "purpleizing."

Of course you may wish to remove the color purple from a note. Do so by deactivating the Purpleizer. Now, any notes you touch turn blue (and red, of course.)

NOTE → The Purpleizer is automatically turned on when you first open the Pattern Grid for the Bass or Melody Players because these are most likely to play melodic patterns that play within the scale, rather than the Pattern.

TOUR DE STYLE

12-8Ballad does not include any purpleized notes. Good examples can be found in the Piano part of the Fill Pattern in Amadeus as well as the Bass part in most Styles. (Check out Boogie.)

Conclusion

This concludes the *SuperJAM!* Tour De Style. You have seen how Patterns and Variations work together to produce the sound and feel of a "live" band by analyzing one of the Styles provided with the program.

It should be clear that every Pattern Grid is the same and the same methodology applies to each. Only the USE of the Pattern changes and with its use, some tricks can be implemented, with a more advanced knowledge of music.

You still don't have to be an expert, however, to create your own Style. Using the default settings that you saw in the tour, you can successfully create your own special Style.

We are ready to move on to the next chapter, where we will walk through the steps of building your own Style.



Chapter 11

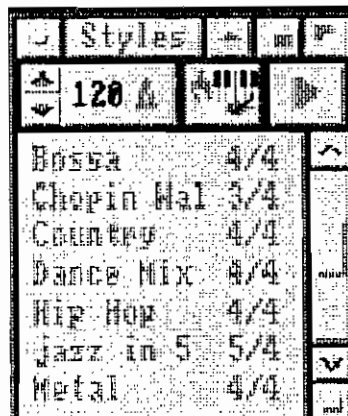
Overview

In this chapter, we are going to guide you through the creation of a Style. If you haven't read the two previous chapters, "Elements of Style" and "Tour de Style," we highly recommend that you do so now. Many of the terms and concepts that we will be using were covered in those chapters.

Using this chapter as a guide, you will create your own Style. Remember though, this is for fun as well as learning. If you are not satisfied with the results, don't worry; you can fix them up or toss them out and start over.

Setting Up A New Style

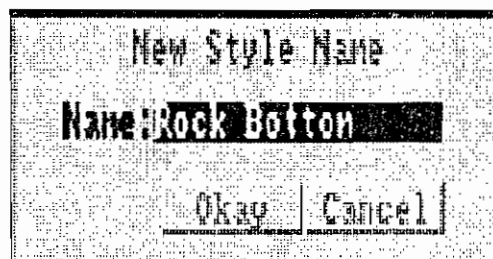
Open the Styles window.



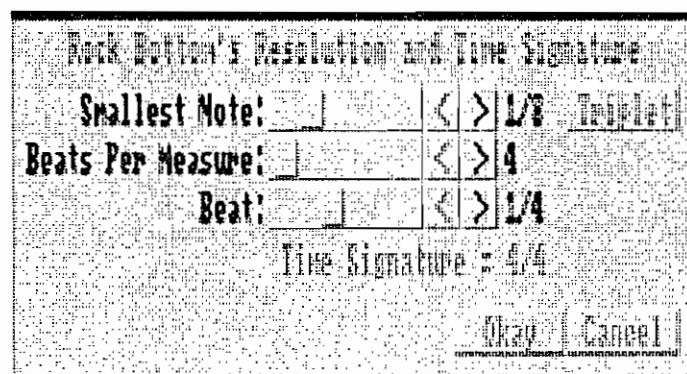
The following steps are the beginnings of creating a Style:

Setting Up Your Style:

1. From the Style menu, select the New command. The New Style requester opens.



2. Enter a name for your Style and click on Okay. The Resolution & Time Signature requester opens.



3. Set the Pattern Grid resolution by dragging the Smallest Note: slider. This determines the smallest size note allowed in the Style, as well as the box size in the Pattern Grid. Typical values are eighth and sixteenth notes.

NOTE → The grid resolution does not determine the quantization (rigidity) of the Style. Do not set the resolution unusually high in hopes of attaining a better "feel" - you'll get that anyway.

4. If you'd like the Style to have a triplet "feel," click on the Triplet button.

YOU'VE GOT STYLE

5. Set the Style's time signature by dragging the Beats Per Measure: and Beat: sliders. These values are based on standard music conventions.

★ TIP ★ The default, 4 / 4, tends to be the most versatile time signature in music. If you are creating your first Style, we recommend that you start with 4/4, and branch out to other time signatures once you have that under your belt.

6. Click on Okay. **SuperJAM!** creates a new Style with the name of your choice and enters it in the Styles list. It also opens the Individual Style window so that you may immediately start working on the Style.

Individual Style Window

The title bar of the Individual Style window bears the name of your new Style. Notice that the program automatically creates your first Pattern and names it "Pattern A". Also note that it has set the W, H, and Q flags.



You can change the Pattern's name by clicking after the Name: prompt and editing the name.

NOTE → The program automatically names each new Pattern with the name "Pattern" and an alphabetical extension. You may change the name to whatever you wish.

You can always change the values of the W, H, and Q flags. However, since you've only got one Pattern, it's best to leave them on. Likewise, leave the special commands (Intro, Break, Fill, and End) off.

By default, the new Pattern is one measure long. Always keep at least one Pattern in your Style this length.

NOTE → For best results, we highly recommend that you design your Patterns to be one measure in length.

Before you start to build your first Pattern, take a look at the two menus in the Individual Style window. Use the first menu, the Style menu, to set global parameters about the Style.

- **NAME**: Opens the Style Name requester. If you have second thoughts about the Style's name, select this command. Type in a new name and click on Okay.
- **TIME SIGNATURE**: Re-opens the Resolution & Time Signature requester. Use this command with caution. Once you've created your Style and entered notes into the Pattern, changing the grid resolution or time signature alters the underlying rhythmic structure of each Pattern. Make sure you duplicate or save the Style first.
- **INFO**: Opens a special word processor/text editor. We highly recommend that you add comments about your Style, including author, recommended tempo and your Band's TurboSound or MIDI, as well as anything else you think may be useful.

The second menu, the Pattern menu, affects individual Patterns in the Style:

- **NEW**: Adds a new Pattern to the list and automatically names it.

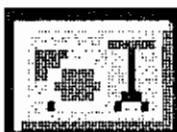
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- **DUPLICATE**: Creates an exact copy of the currently selected Pattern, including the name. It is best to rename the duplicated Pattern to avoid confusion. This is very useful for creating special purpose Patterns. For example, to create a Fill Pattern, duplicate your standard "groove" Pattern, rename it "Fill," set the Fill flag, and open the Pattern grid to add extra note activity.
- **LOAD**: Loads in a Pattern previously saved with the Save command.
- **SAVE**: Saves the currently selected Pattern to disk.
- **REMOVE**: Removes the currently selected Pattern from the Style.
- **LENGTH**: Opens a requester to change the current number of measures assigned to the currently selected Pattern.

Opening The Drum Pattern Grid

Let's start building the first Pattern.

The Pattern provides parts for each of the six Players. We'll create their parts one by one. It makes sense to start with the Drums, because they provides a rhythmic basis for the rest of the music.



Click on the Drums button (the far right of the Band Members.) The Pattern Grid appears for the Drum part. In this window, you will show the Drummer what to play.

Pattern Defaults

Notice that all 16 Variation buttons are activated (depressed and highlighted in red.) This means that all notes you enter will be recorded on each Variation.



Also notice that the mouse pointer resembles a pencil and the Pencil button is activated. This means that *SuperJAM!* is ready to record.

Let's take a quick look at the Preferences menu:

- **AUTO QUANTIZE**: This option resolves all notes entered exactly to the grid boundaries. As a result, it corrects any sloppiness in your playing. However, this can also result in a performance that is too rigid for some Styles. Experienced musicians tend to turn this feature off while others rely heavily on it. By default, Auto Quantize is on.
- **METRONOME**: When activated, this plays a click on every beat. This feature is absolutely essential if you plan to enter notes in real-time. By default, this is on.
- **SET METRONOME**: Use this command to set the metronome to a particular note (or drum.) Here's how:

Setting The Metronome

1. Select Set Metronome. The cursor changes to a brown metronome.
 2. Click on the drum name that you want to use for the metronome. For example, if you choose the Closed Hi Hat, the metronome plays the Closed Hi Hat on every beat.
-

By default, the metronome is set to the metronome sound in the drum kit.

- **MULTIPLE GRID WINDOWS**: When selected, this option enables more than one of the Pattern's windows to be open at the same time. By default, this is off.

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★ TIP ★ Multiple windows consume memory, and, on slower machines, slow things down dramatically. If you are using a 'lower end' computer configuration, we recommend that you leave Multiple Grid windows deselected.

- **AUTO SCROLL:** If the Pattern is too large to view, this option enables the grid to scroll as the Pattern plays. By default, this is off.

Before you start recording, you may wish to resize and reposition the Pattern Grid window as well as click on the Zoom In or Zoom Out buttons to get the optimum view of the Pattern before you start recording.

Recording A Drum Pattern

There are 3 ways to enter notes into the grid.

- Tapping notes with the mouse
- Drawing notes into the grid
- Performing from your MIDI keyboard

NOTE → Regardless of what method of entering notes you choose, the Pencil **MUST BE SELECTED**. The Pencil is synonymous with 'record/edit.'

In all three cases, for immediate feedback, you can enter notes as the Pattern loops.

Let's record a Pattern using all three options:

Recording A Pattern:



1. Click on the Play button to start the Pattern looping.
2. Drag the right scroll bar all the way to the bottom so that the Bass1 drum appears on the left.

3. Click down with the mouse in the first grid box to enter a bass note on the first beat. Hold the mouse down and drag vertically to set the drum's velocity (relative volume.)
4. Listen to the Drummer play, accompanied by the metronome. Get a feel for when there should be another bass drum beat.
5. Play another bass drum beat by clicking on the bass drum's name in the far left column. *SuperJAM!* automatically enters it in the grid.
6. Move the mouse up to the snare drum and click on it to enter some snare hits.

NOTE → If you have a **MIDI** keyboard, you can enter drum beats by playing the corresponding notes on your keyboard.

★ TIP ★ You can test the relationship of piano keys to drums by stopping the Pattern and playing on the **MIDI** keyboard. Notice that each drum name lights up when it is played.

7. If you are experienced with the mouse modes, e.g., Pencil or Magic Wand, use the Hand to drag notes, the Duplicator to copy them, the Eraser to remove them, and the Magnifying Glass to inspect them, while the Pattern continues playing.

8. Click on the Stop button to stop the loop.

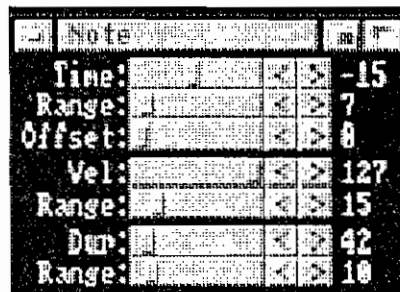
Editing Modes

For those not familiar with the mouse modes, we'll tour them now. If you've already worked with them in the Snapshot window, skip this section.

When you're in the Pattern Grid, you have access to all the *SuperJAM!* editing modes. Let's tour the editing modes.

The Magnifying Glass

Click on the Magnifying Glass button. The Note window instantly appears and the mouse pointer turns into the Magnifying Glass.



Move the Magnifying Glass over a note and click on it. The Note window displays all of the note's internal values as follows:

- **TIME:** This represents the note's time offset from the grid, measured in 192 pulses per quarter note. For example, a note that plays slightly before the grid line could have a time value of -12. A zero value is given to a note that falls or plays exactly on the beat.

NOTE → When notes are entered using the Auto Quantize option, they are always given a zero note time value. With this feature off, the notes receive Time offset values that represent just how far they are from the grid line.

- **RANGE:** *SuperJAM!* randomizes the timing of the note as it plays it to give it some extra "feel." This slider sets the degree of randomization. The greater the Range, the less precise the notes sound when they play. Experiment with the Range as the Pattern plays. Watch your note get progressively farther and farther from the beat. *SuperJAM!* provides an initial Range value that we feel approximates the "feel" of a live performer. If you want your performance to sound highly mechanized and accurate, drag the Range to 0. If you'd like to create a comedy Spastic, Dweeb, and Geek Marching Band Style, set the Range to a large number and let the music stumble all over itself.
- **OFFSET:** This slider moves the note into a later grid box and compensates by adjusting the time. This feature allows you to design Pattern notes that "anticipate" the next chord change. For example, you might enter a chord in the Piano part that plays just before the beginning of the new measure. However, it should play the chord of the new measure, not of the measure it is in. Drag the offset slider to the right until the offset value is equal to the number of grid boxes between the chord note and the new measure. Watch *SuperJAM!* redraw the note in the new measure, but notice that the TIME: value has become a large negative number. Now, the note is positioned in the new measure, but the large time offset forces it to play at the original time.

NOTE → Notes with anticipations greater than an eighth note will not always play early enough in the Keyboard window. However, they will always work once placed within a Section.

- **VEL:** This represents the note's velocity, a MIDI value from 1 (very soft) to 127 (very loud.) Although you can see the note's velocity is represented in the grid by its height, this is only a rough value. This slider reveals its exact value.
- **RANGE:** *SuperJAM!* also randomizes the velocity of each note. This slider sets the degree of "feel."

- **DUR:** This slider controls the note's duration, measured in 192 pulses per quarter note. For example, a note that lasts exactly one half note would have a length of 384. The grid draws the note's duration as the length of the bar; "Dur" gives you the exact value.
- **RANGE:** *SuperJAM!* also randomizes the duration of each note. The greater the Range, the greater the variety in note length.

Click on different notes and watch the values in the Note window change.

The Pencil

Use the Pencil to enter notes in the grid. (Please refer to the previous section for a thorough explanation.)

The Magic Wand Use the Magic Wand to change the length or dynamic level of a note. Put the wand tip on any note in the grid, click and hold on the note. Drag the note to change the length and dynamics and release the mouse button. Watch the values change in the Note window (if it's still open.)

★ TIP ★ The Pencil automatically turns into the Magic Wand if you click down and hold on a note. This way, you have access to the features offered by both mouse modes.

The Hand

To move the position of a note, click on the Hand button. Point the Hand at the note, then click and drag it anywhere in the grid. *SuperJAM!* plays the note as you drag it.

The Duplicator

To make a copy of a note, use the Duplicator. To do so, click on the Duplicator button and position it so that the blue lines of the pointer (upper left corner,) are anywhere on the note. Then, click and drag the note to a new position. When you lift up on the mouse, you'll find a copy of the note.

The Eraser

To remove notes, click on the Eraser button. Position the mouse pointer over a note and click down to erase it.

★ TIP ★ If you hold the mouse button down and drag the pointer, you can erase several notes at once by dragging the Eraser over them.

As with the Pencil, you can use the Eraser from your MIDI Keyboard as well. Erase notes by holding down the notes you'd like to remove while the Pattern plays.

The result is that you really don't have to stop the loop until you have adjusted and approved of everything.

Adding Variations

When the Pattern sounds (and looks) the way you want it to, begin adding Variations. When you first started creating your drum Pattern, all of the Variation buttons were on. Now, we're going to select just a few Variations at a time and alter them.

Altering A Few Variations

1. Click on the Play button.
2. Click on the All button once to deselect all of the Variations.
3. Click on Variations 1 through 4. With only these Variations selected, the edits you make and notes you enter will only appear in these Variations.
4. Enter embellishment notes with the Pencil.

5. Use the Hand, Duplicator, and Eraser to change the Pattern. Remember, the changes you make only affect Variations 1 through 4.
6. Deselect Variation 1 and select Variation 5. Make a few more changes. These changes effect 2 through 5, leaving 1 alone.
7. Continue as above. Feel free to select arbitrarily different clumps of Variations and make changes. You need not be scientific about it. Have fun.
8. Once you've covered all the Variations, click on the Solo button to select just one Variation at a time.
9. Listen to each Variation and make any last changes. When *SuperJAM!* performs the Pattern, it will only play one Variation at a time.

Notes are shared between selected Variations. Whatever Variations are selected while you're designing a specific part of your Pattern, will contain the notes of the specific part of the Pattern.

The Variations

The Variations menu provides additional commands to assist you in the process of creating the Variations:

- **MERGE SELECTED:** This command sets all visible notes to belong to all selected Variations. For example, if Variations 1 and 2 are selected, the grid displays notes belonging to both. Use merge selected to make all the notes in Variation 2 belong to Variation 1 and vice versa.
- **CLEAR SELECTED:** This command erases all notes in the selected Variations. Use to "start over" with a particular Variation. Use in conjunction with merge selected to copy one Variation to another:

Merging Variations:

1. Select only the destination Variation.
 2. Clear it with the Clear Selected command.
 3. Select the Source Variation. Now, both Source and Destination Variations should be selected.
 4. Choose the Merge Variation command.
-

- **DESIGN/PLAY IN NUMERICAL ORDER:** This option places the Variations in Solo Mode and sets *SuperJAM!* to play each Variation in sequential order.

★ TIP ★ Use the previous option to lay down embellishments for each Variation quickly.

- **PLAY IN RANDOM ORDER:** This option places the Variations in Solo Mode and sets *SuperJAM!* to play each Variation in random order. When you have created all the Variations and you have tweaked and edited your Drummer's part until you are happy with it, choose this option and sit back and listen. Watch the Variation buttons randomly pop up and down.

NOTE → The Play In Random Order option automatically turns off all mouse modes to prohibit editing.

You have created your first Pattern with its Variations and now you are ready to do the same for another Band Member. Let's move on to the Bass Player.

Creating The Bass Pattern

To switch from one Player to another, click on the appropriate Player button. In this case, click on the Bass button.

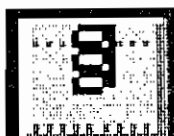
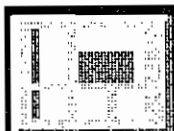
Since we've just created this Pattern, *SuperJAM!* doesn't know what key signature and chord we want to use to enter notes. It doesn't need this information for Drums, but now that we're about to work on the Bass, it does.

The Key & Chord requester opens. Accept the default values of C Major scale and a C Major 7 chord and click on Okay to continue. (For more on this requester, please see the preceding chapter.)

The Pattern Grid opens with an empty Bass Pattern.

★ TIP ★ If your system starts slowing down as you continue the process of opening new Pattern Grids, be sure that the Multiple Windows option is turned off (not check marked) in the Variations menu.

Notice how several buttons are preset specifically for entering the Bass Pattern:



- The Purpleizer button is activated. (Usually, you want all Bass notes to play, regardless of the position in the chord.)
- The Inversion button is not activated. (Bass lines generally should not be inverted, although there are exceptions.)
- The Pencil is activated, ready to enter notes.

- Once again, all Variations are turned on. (The first Bass part notes you enter will be shared by all Variations.)

You are ready to record the Bass part. Begin to enter notes just as you did for the Drum part. Use all of the editing modes to enter and alter notes. Work with the Variation buttons to create multiple versions of the Bass part. The process is exactly the same for each Player.

★ TIP ★ Although all sixteen Variation buttons are activated to begin with, you do not necessarily have to leave them all down before recording. You may want entirely different musical activity to be happening on each Variation, instead of having each Variation sharing notes in common with every other.

NOTE → Make sure you write the Bass line for the current Key and Chord. If you've stuck with the defaults, then you would write a Bass line in the key of "C" Major that performs for the "C" Major 7 chord.

The Style Menu The Style menu provides commands that are unique to creating a Style. This menu is disabled in the Snapshot Grid. It has commands that can be very useful while designing the Bass Pattern. The commands are:

- **ALWAYS PLAY SELECTED NOTE** : This option reflects the status of the Purpleize button. It is activated by default in the Bass grid.
- **TEST CHORDS**: Enable this option to hear the Pattern as it will sound when performing different key signatures and chords in the Keyboard window. This is invaluable for determining if the Pattern will work properly under different conditions.
- **SET PATTERN KEY & CHORD**: Opens the Key & Chord requester. Use this to verify and/or edit the current working key signature and chord. (For details, please see the preceding chapter.)

YOU'VE GOT STYLE

Let's move on and cover one more Player, the Piano. Click on the Piano button to bring the Piano grid to the front.

Creating The Piano Pattern

Let's see how things are set up for the Piano part:

- The Purpleize button is de-activated. (When you enter chord parts for the Piano, you want the top notes of the chords to play only for performing 7th chords.)
- The Inversion button is activated. (Piano chord parts tend to invert very nicely.)

You are ready to record the Piano. Begin to enter notes just as you did for the Drum and Bass parts.

NOTE → Remember to create chords that fill the complete chord as defined in the Key and Chord requester. If you've stuck with the default values, that means your chords should have 'C', 'E', 'G', and 'B' in them.

The Grid menu has three commands that you might need:

- **CLEAR**: This command erases all notes in the grid. Unlike the Variations Clear command, this clears all notes in all Variations. If you want to scrap everything you've done for the Piano so far, select this command.
- **SHIFT OCTAVE UP**: This command moves all notes up one octave. Sometimes, you may find you've created a Pattern that is too low in pitch. Use this command to move the Pattern into the right octave.
- **SHIFT OCTAVE DOWN**: This command moves all notes down one octave. If you've created a Pattern that is too high in pitch, use this command to move the Pattern into the right octave.

When you're done with the Piano part, move on to the next...

Finishing The Pattern

We've covered everything you need to know to create the remaining parts. Just keep in mind a few pointers:

When Creating A Pattern:

1. Don't overdo it. It's very easy to create a Style that's too busy. Carefully orchestrate the parts so that the different Players work together, instead of crowding for attention. And, if you're working with TurboSound Instruments, pay particular attention to keeping the arrangements sparse.
2. Study the supplied Styles for tips and techniques.
3. Players that perform chords (usually the Piano, Guitar, and Strings) need to play the full 7 chord.
4. Players that perform melodically (usually Bass and Melody) need to Purpleize notes high in the octave to insure that they always play.
5. Interactively test each Pattern as you compose with the Test Chords option in the Style menu. Try all kinds of chords.

6. Usually invert chord parts. The inversion covers the full range of the notes you enter. If you enter a Pattern that spans more than two octaves, the inversion also spans more than two octaves. Such inversions are usually too wide in range to be effective.
 7. Keep the range of notes as narrow as possible, whether or not you are inverting the part.
-

Variation Choices

The following is *SuperJAM!*'s most advanced feature. You should not address it until you are an accomplished Style maker.



To the right of the Variation button is the Variation Choices button. This opens the Variation Choices window. If you have not already done so, please read the previous chapter for an explanation of the Variation Choices feature. Here, we'll just concentrate on the features that were not covered in that chapter.

Open the Variation Choices window by clicking on the button. Sit back and watch all those buttons draw...

As you know, each Variation is listed vertically in the far left column with a row of chord criteria to the right of it. You can click on any button to enable or disable its criteria.

By default, all Variations are enabled for all chord types and scale positions. You can start to rearrange the Variation Choices by clicking on these buttons. You can also use the command buttons across the top as well as several menu options.

The command buttons all refer to the currently selected Variation. You can select a Variation by clicking on the Variation number in the far left, or by clicking on any criteria button (which also toggles the button.) To use these commands, first select a Variation, then click on the command.

- **COPY**: Copies the Variation's criteria to a second Variation. Notice that the Copy button remains depressed until you select a second Variation, which is the destination Variation.
- **CLEAR**: Clears all Variation criteria.
- **SET**: Enables all Variation criteria.
- **INVERT**: Toggles all Variation criteria.
- **REMAINING COMBINATIONS**: This option can be very useful when you are building a complex set of Variation criteria. This scans the Variations and finds any chord types or scale positions that have not been covered.

Example:

You may have a Variation that supports Major chords and another Variation that supports the I chord, but none that supports both I and Major. This command would set the I and Major buttons in the selected Variation.

In addition, we have three commands in the Variation Choices menu:

- **LOAD**: Loads a Variation Choices file from disk. You can save your Variation Choices from one Pattern and reload them into another Pattern, thereby avoiding having to reenter them all over again.
- **SAVE**: Saves the Variation Choices to disk.

- **PRINT:** Prints the Variation Choices. Once you've set up the Variation Choices, print them out. Then, you can close the window and use the printout as a reference as you work in the Pattern Grid.

This concludes our work in the Pattern Grid window. Let's return to the Individual Style window where we can finish our Style.

Assigning A Fill, Intro, Break And End

Now that you've created your standard, "groove," Pattern, it's time to create special purpose Patterns to support the Fill, Break, Intro, and End commands.

Here's how you might create a Fill Pattern:

Example:

1. Select the Duplicate command in the Pattern menu to make a copy of the first Pattern. The new Pattern is identical to the old, both in name and content.
2. Change the name by clicking after the Name: prompt and entering, "Fill." Press the carriage return key on your Amiga keyboard to enter the name in the list.
3. Click on the Fill button. Notice that the list always places the special command Patterns after the normal Patterns.

4. Open the Pattern Grid for each Player in the Fill Pattern and edit the performance to create a Fill.
-

NOTE → You can also create Fills from scratch, although basing a Fill Pattern on a pre-existing Pattern within your Style will save you time.

We highly recommend that you study the 30 (or maybe more!) Styles that come with *SuperJAM!* for examples of Fills, Breaks, Intros, and Ends.

NOTE → Send in your registration card! We'll be announcing new Styles disks in our newsletter, *Quarter Notes*, which is sent only to registered users of *SuperJAM!*

Once you've finished your Style, don't forget to save it.

Saving Your Style:

1. Click on your new Style's name in the Styles window.
 2. Select the Save command from the Style menu. The File Requester opens.
 3. Type in the name of your Style after the File: prompt. Make sure a Style with the same name does not already exist.
 4. Click on the Save button to save it.
-

From now on, your new Style will load every time you run *SuperJAM!*.

YOU'VE GOT STYLE

NOTE → It's not a good idea to have lots and lots of Styles permanently installed. They consume memory and dramatically slow the startup time of the program. Use the Remove command in the Style window's Style menu to remove a Style.



Chapter 12

SuperJAM! Drum Maps

Most MIDI instruments today can play a complete set of drums as well as standard musical instruments. They do this by "mapping" notes to drums.

If you connect a MIDI keyboard to the MIDI instrument and set it to play drums, each key on the keyboard triggers a different drum sound. This is wonderful because it provides a simple method for integrating drums with tonal instruments.

It has one problem, though: different MIDI instruments use different standards for mapping the notes to drums. In other words, a "C" in the fifth octave may play a crash cymbal for one MIDI instrument and a conga slap for another. As a result, a drum performance that sounds great with one synthesizer may sound completely inappropriate with another.

SuperJAM!'s solution is to support all MIDI instruments by letting you choose which drum "map" to use. When you set up your instruments in the Band window, you can load a drum map from disk with the Drum Map menu. *SuperJAM!* includes a set of drum maps for the most common synthesizers.

By default, *SuperJAM!* uses the Roland MT-32 drum map format. This is by far the most popular format and most MIDI instruments today support it directly. However, if you find that your MIDI Instrument does not support this format, or any of the other formats we provide on disk, you can easily create your own.

Creating A Drum Map

The Drum Map editor is found within the Drum Player's Pattern Grid window. To access it, you must open a Pattern Grid (or Snapshot Grid, for that matter) for the Drum Player. The easiest way to do this is via an existing Style.

Accessing The Drum Map Editor:

1. Open the Styles window by clicking on Styles in the Quick Strip.
 2. Double click on any Style name to open the Individual Styles window .
 3. Select any Pattern in the Individual Style window.
 4. Click on the Drums button (far right.) This opens the Pattern Grid for the Drum Player.
-

Notice that above the list of drum names is a button titled, "Edit." When this button, the Drum Map Edit button, is enabled, the standard mouse modes apply to editing the drum map instead of the notes within the grid.



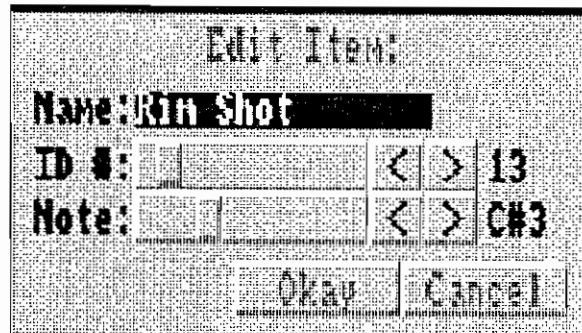
We'll walk through the process of changing the drum map to suit your MIDI instrument:

Changing A Drum Map:

1. Click on the Edit button to enable it.
2. Click on the Magic Wand, the third button from the left in the Pattern Grid window. Notice that the mouse pointer becomes a wand. The Magic Wand is used to make changes. We're going to change the drums.

CREATING A DRUM MAP

3. Click on a drum name. The Edit Item requester opens. It displays the internal drum ID number, the name, and the MIDI note value for the drum. Don't touch the name or ID.



4. Drag the Note: slider to the proper drum value. As you drag the slider, it plays each note so that you get instant feedback. When you've found the proper sound in your MIDI instrument, click on the Okay button.
5. Repeat steps 3 and 4 for every drum in the list. You'll need to use the scroll bar at the right edge of the grid to view all of the drums.
6. When you've finished, click down on the right mouse button and go to the Drum Map menu and select the Save command. A standard *Super-JAM!* file requester opens.
7. Give the drum map a file name and save it to disk by clicking on the Save button.

8. Click on the Edit button to disable it.
 9. Go to the Quick Strip and open the Keyboard window. The Keyboard window comes to the front. Your new Drum Kit is already installed in the Keyboard's Band. Click in the Keyboard window to activate it.
 10. Go to the Keyboard menu and select Save As Default. This automatically saves the new drum map with your Default set-up.
 11. Close the Keyboard window to get it out of the way.
-

That's it! You've created your own Drum Map and installed it as the system default. From now on, every time you run *SuperJAM!*, this drum map will load as part of your Keyboard Band.

Before we leave the Pattern Grid, let's cover all of the mouse modes and see how you can use them with the Edit button:

- **PENCIL**: Use the Pencil to enter a new drum map. Click on the drum names and the Edit Item requester opens with a unique ID. Type in the drum name and the MIDI Note and click on Okay to install.
- **ERASER**: Use the Eraser to delete a drum map. Click on the drum's name.
- **DUPLICATOR**: Use the Duplicator to make a copy of a drum map. Click on the source drum name. The Edit Item requester opens. Change the name and set the MIDI Note. The ID has already been set for you. Click on Okay to accept.

CREATING A DRUM MAP

- **HAND:** Use the Hand to rearrange the positioning of names. Click on a drum name and drag it to a new location. The grid display reflects the change.

Let's also look at the Drum Map menu:

- **DEFAULT:** Replaces the current drum map with the default MT-32 format drum map. This is the format that most MIDI equipment recognizes, including our own TurboSound drum kit.
- **LOAD:** Replaces the current drum map with one loaded in from disk.

NOTE → The Band performing in the Pattern Grid is also the one performing in the Keyboard window. Therefore, loading in a new drum map from here also affects the performance of the Band in the Keyboard window.

- **SAVE:** Saves the current drum map to disk.

Chapter 13

The *Superjam!* Connection

Once you've created a *SuperJAM!* composition, you can integrate with external music and multi-media products via the following options:

- Save your composition in the Amiga SMUS format for other Amiga music and multi-media programs.
- Save your composition in the MIDI File Format for music and multi-media programs on the Amiga as well as other computers.
- Synchronize your *SuperJAM!* performance with other multi-tasking Amiga programs via dedicated *SuperJAM!* Accessories.
- Synchronize your *SuperJAM!* performance with other multi-tasking Amiga programs via ARexx.
- Synchronize your *SuperJAM!* performance with other hardware via MIDI Time Code.
- Synchronize your *SuperJAM!* performance with other hardware via SMPTE.
- Synchronize your *SuperJAM!* performance with other hardware via MIDI Clocks (Song Position Pointer.)
- Load *SuperJAM!* directly into Bars&Pipes Professional for seamless integration within the Bars&Pipes Professional sequencing and musical composition environment.

NOTE → With the exception of the Bars&Pipes Professional option, all of the above methods assume you've created a *SuperJAM!* composition in the Song window. You cannot do any exporting or synchronization from the Section or Keyboard windows. You must first create a Song.

Before we discuss any of the options mentioned above, we need to discuss the SMPTE time format and its use in *SuperJAM!*.

The Smpte Time Format

When you create a piece of music for some media, such as television or film, you need to know how your music fits together with the visual images, voice track, and sound effects. Typically, the method of coordinating these elements is associated with timing: hours, minutes and seconds. For example, if you're working on the score for a video, you may need to time the music to start at a specific time and last a certain number of seconds.

An industry standard that provides a common system for timing and synchronization is called SMPTE. SMPTE stands for the organization that invented it, the Society of Motion Picture and Television Engineers. SMPTE (the standard, not the organization) synchronizes multiple pieces of equipment by providing a time reference in hours, minutes, seconds, and frames.

You may have noticed the SMPTE button in the Quick Strip. Click on this button to open the SMPTE window.

The SMPTE window displays the time in hours, minutes, seconds and frames. Use it as a reference while you compose your Song.

NOTE → The SMPTE window only displays the time in the Song window. It does not support the Keyboard and Section windows, because they can only perform segments of the finished composition.

Because different media have different frames per second rates, the SMPTE standard measures time in different formats. Motion pictures run at 24 frames per Section, European TV runs at 25 frames per second, and American TV runs at 30 frames per second. SMPTE formats support all of these frame rates.

SUPERJAM! AND MULTI-MEDIA

In addition, because of a discrepancy in American color and black and white TV formats, a fourth format, 30 drop frame, is also supported by SMPTE. Fortunately, all of these formats provide the same time in hours, minutes and seconds. Only the frame count within each second varies.

Set the appropriate SMPTE Format by selecting the SMPTE Format option in the Timing menu of the Song window.

Often, you'll need to incorporate a time offset into the SMPTE time. For example, you might be working on a film score that is supposed to start at the time: 30 minutes, 23 seconds. You can tell *SuperJAM!* to start the SMPTE time at this specific time offset. To do so, select the SMPTE Offset command in the Timing menu of the Song window to open the SMPTE Offset requester. Type the start time in hours, minutes, seconds and frames and click on Okay. Notice that the SMPTE window now starts at the new time instead of at "00 00 00 00."

Now that we've covered SMPTE time, let's look at all of *SuperJAM!*'s multi-media options in detail.

Saving In Other File Formats

Standardized file formats allow programs on all platforms to read and write common information. For music, two formats are prevalent: SMUS (simple music) format and MFF (MIDI file format.) For your convenience, *SuperJAM!* can save in either format.

Exporting To Smus

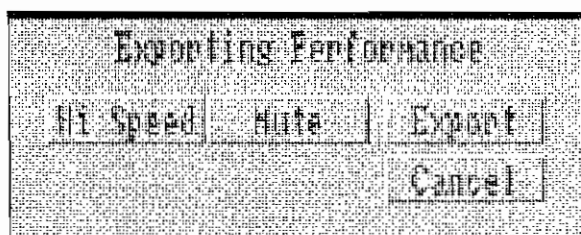
SMUS is an Amiga IFF music file format. Unfortunately, it's one of the weaker formats, but it is supported by many Amiga software packages. You can save your *SuperJAM!* compositions in the SMUS format and then read them into other programs that support SMUS.

NOTE → If the destination program can also read MIDI Files, we highly recommend you save in that format instead. (See the next section.)

Saving in any format other than the *SuperJAM!* format is not as simple as it may seem for one reason: *SuperJAM!* never keeps an exact copy of its performance around. Instead, it always performs in a dynamic, ever-changing manner. *SuperJAM!* needs to record a performance, then save it in the SMUS format. Here's how you do it:

Saving Your Composition As A Smus File:

1. Activate the Song window.
2. Select SMUS from the Export menu in the Song window. The *SuperJAM!* file requester opens.
3. Type in a file name and click on Save. The Exporting Performance requester opens.



4. To record the performance quickly at a high speed, click on the HiSpeed button.
5. To record the performance quietly, click on the Mute button. You may toggle this and the HiSpeed button later while the performance records.

SUPERJAM! AND MULTI-MEDIA

6. Click on the Export button. The Song window Play button depresses and *SuperJAM!* starts to play. When the Song reaches its end, the performance stops. *SuperJAM!* automatically saves the Song to disk.

Exporting To Midi File Format

The MIDI File format is a standardized format used by almost all professional music programs on computers of all types. In addition, many multi-media programs use this format for music files

As with the SMUS format, *SuperJAM!* must first record the performance, then save it in the MIDI File format. Here's how you do it:

Saving Your Composition To Midi File Format:

1. Activate the Song window.
2. Select MIDI from the Export menu in the Song window. The *SuperJAM!* file requester opens.
3. Type in a file name and click on Save. The Exporting Performance requester opens.
4. To record the performance quickly at a high speed, click on the HiSpeed button.

5. To record the performance quietly, click on the Mute button. You may toggle this and the HiSpeed button later while the performance records.
 6. Click on the Export button. The Song window Play button depresses and *SuperJAM!* starts to play. When the Song reaches its end, the performance stops. *SuperJAM!* automatically saves the Song to disk in the MIDI File format.
-

Synchronizing Via Special Accessories

As you may already know, Bars&Pipes Professional, our interactive MIDI sequencing and composing product, is open-ended so that we can add new features to the program without requiring our customers to pay for costly upgrades. Bars&Pipes Professional's flexible nature also provides a mechanism by which other companies' products can connect directly with it.

Over the past few years, we've worked closely with many of the "major players" in the Amiga market and have encouraged them to forge connections with Bars&Pipes Professional. One by one, they've begun to turn out products that take advantage of a direct link with Bars&Pipes Pro.

Products like Real3D, Scala, and Imagine either have been, or soon will be, released with direct connections to Bars&Pipes Professional. These connections benefit users of all products. As one example, you now can directly synchronize on the same machine, at the same time, your composition with an animation that you are creating.

SUPERJAM! AND MULTI-MEDIA

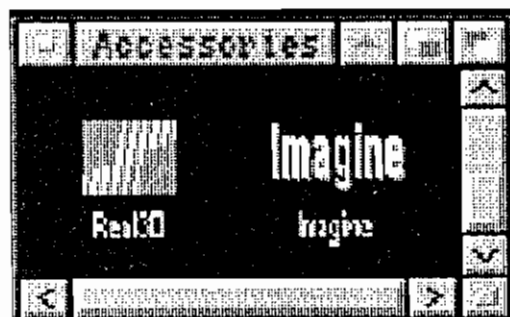
We've included the same synchronization mechanisms in *SuperJAM!* that we have in Bars&Pipes Professional. As such, programs that connect directly with Bars&Pipes Professional also connect with *SuperJAM!*

The Accessories Window

The Accessories window is the mechanism for integrating other applications into *SuperJAM!* Using it, you can load Bars&Pipes Professional Accessories, as well as Accessories written especially for *SuperJAM!* and use those Accessories for synchronization.

NOTE → All Bars&Pipes Pro Accessories will load into SuperJAM!. However, only Accessories that control synchronization will be functional. We've included all the current synchronization Accessories with SuperJAM!.

Let's take a look at the Accessories window.



Click on the Accessories button in the Quick Strip. The Accessories window opens. By default, it is empty. In order to use Accessories, you must first load them.

The Accessories Menu

Use the Accessories menu to install and remove Accessories:

- **LOAD:** Loads an Accessory from disk. Opens the File Requester. Select an Accessory from the Accessories drawer and click on Load.

- **SAVE:** Saves an Accessory to disk. This copies the Accessory from its original storage place to a new location that you specify. If you receive a new Accessory, you can load it from floppy, then save it to your Accessory drawer with this command.
- **REMOVE:** As with Styles, once an Accessory is loaded, it is permanently installed in *SuperJAM!*. You must use the Remove command to eliminate it from your Default setup. Like Styles, Accessories take up your computer's memory; therefore, if you don't need an Accessory, remove it.

Once you've installed an Accessory, you'll find its icon in the Accessories window. Most Accessories have a Control window that can be accessed by double-clicking on the icon.

NOTE → Please refer to the on-disk documentation accompanying each Accessory in the Accessories drawer for information on how to use each one.

We've included all of the currently available Accessories with *SuperJAM!*. As new Accessories become available, we will release them into the public domain and/or with future versions of *SuperJAM!* In addition, other software developers are including special Bars&Pipes Professional/*SuperJAM!* Accessories in their products.

NOTE → If you are using TurboSound Technology and are running on an unaccelerated machine, you may not be as successful when synchronizing with other products. *SuperJAM!* does not require too much processor time to perform; however TurboSounds do. If the program with which you are synchronizing is processor intensive, both programs will bog down. If you are a budding multi-media artist on a budget, we highly recommend that you purchase an affordable multi-timbral MIDI sound module.

Imagine. Every time you start your slide show or 3d animation, music plays, synchronized to the picture. And, every time it's a slightly different performance, as with a real live band.

SUPERJAM! AND MULTI-MEDIA

Arexx

Many Amiga programs use the ARexx language as a system for inter-program communication and synchronization. If you use any programs that broadcast ARexx commands, you can use them to control the *SuperJAM!* performance. These include commands to start and stop the performance, and even pick up at a specific time. All time values can be in music time (measures, beats, and clicks,) or real time (hours, minutes, seconds, frames.)

ARexx is also implemented as an Accessory. Install it with the Load command in the Accessories menu. The ARexx Accessory has no Control window. As soon as it is installed, *SuperJAM!* is ready to be controlled via ARexx.

Like the previous Accessories, the documentation for the ARexx Accessory is provided on disk.

Synchronizing To External Hardware

Machine such as reel-to-reel recorders, video decks and MIDI instruments can be controlled in a number of ways. *SuperJAM!* provides several methods for external synchronization.

Midi Time Code

You can synchronize *SuperJAM!* to other hardware via the MIDI In connector and a MIDI protocol called, "MIDI Time Code." MIDI Time Code is actually a version of SMPTE Time Code; it's just transmitted via a MIDI cable.

To use MIDI Time Code, load the MTC Accessory. (Please see above.). The documentation for this module is included with it in the Accessories drawer.

Synchronizing Directly With Smpte

NOTE → You need not set the SMPTE Format with MIDI Time Code. It will automatically do so for you.

You can synchronize directly with SMPTE via the Phantom

Accessory and the Phantom SMPTE interface from Dr. T's Music. The Phantom Accessory communicates with the Phantom interface to provide direct SMPTE support through hardware, rather than through MIDI Time Code.

NOTE → You must have the Phantom interface and software installed in your machine before loading the Phantom Accessory into the Accessories window. (Please read your Phantom manual for instructions.)

Once again, the documentation is included on disk in the Accessories drawer.

Using Midi Clocks (Song Position Pointer)

There's a MIDI protocol designed to synchronize machines in music time, rather than SMPTE time. It's called "MIDI Clocks," or sometimes, "Song Position Pointer." MIDI Clocks synchronize machines in music time. When the first device starts at a particular musical moment, the second picks up from there as well. The second also follows the tempo of the first.

Use MIDI Clocks to synchronize *SuperJAM!* with hardware sequencers, drum machines and software sequencers. It's a great way to download your *SuperJAM!* performances into a multi-track sequencer on another machine. (Of course, you can do that all on one machine if you have Bars&Pipes Professional.)

SuperJAM! can both send and receive MIDI Clocks. Enable either option with two commands from the Timing menu in the Song window:

- **LOCK TO MIDI CLOCKS:** Tells *SuperJAM!* to lock to incoming MIDI Clocks. Use this feature when you want another device to control *SuperJAM!*.
- **SEND MIDI CLOCKS:** Tells *SuperJAM!* to send MIDI Clocks out the MIDI interface as it performs. Use this feature to control another device from the Song window's Start and Play buttons.

SUPERJAM! AND MULTI-MEDIA

Bars&Pipes Professional

In addition to running as a stand-alone music composition program, you can integrate *SuperJAM!* with Bars&Pipes Professional, further expanding the power and capabilities of both programs. Once you integrate Bars&Pipes and *SuperJAM!*, you can use *SuperJAM!*'s interactive environment to create music; then feed the output, in real time, into Bars&Pipes Professional's PipeLines, where you can sequence, edit, enhance with a multitude of special effects and compositional Tools, and even print notation output.

How is this accomplished? As you already know, both *SuperJAM!* and Bars&Pipes Professional provide an Accessories Window which gives external programs and utilities a place to tie into the main program. We've accomplished the *SuperJAM!* connection by creating a special version of *SuperJAM!* that is itself an Accessory. Simply pull *SuperJAM!* into Bars&Pipes Professional by loading this Accessory into the Bars&Pipes Professional Accessories window. You will find the *SuperJAM!* Accessory in the Bars&Pipes Professional drawer in your *SuperJAM!* release disk.

The Superjam! Accessory

Load the *SuperJAM!* Accessory into Bars&Pipes Professional with the Load... command in the Accessories menu. (Please see either the *SuperJAM!* or Bars&Pipes Professional manual for further information on loading Accessories.)

Once *SuperJAM!* is loaded as an Accessory, it displays its icon in the Accessories window. To open the *SuperJAM!* Quick Strip, double click on the *SuperJAM!* icon.

NOTE → Closing the Quick Strip by clicking on the Close button on its far left does not close *SuperJAM!* or Bars&Pipes Professional. Instead, it only removes the Quick Strip. *SuperJAM!* will continue composing and playing music. Reactivate the Quick Strip by double-clicking on the *SuperJAM!* icon in the Accessories window.

Superjam! Tools For Bars&Pipes Professional

The *SuperJAM!* Accessory automatically loads seven additional *SuperJAM!* Tools, which it places in the Bars&Pipes Professional ToolBox. Six of these represent the six *SuperJAM!* Band Members: Drummer, Bass, Piano, Guitar, Strings, and Lead.

You must place these in appropriate PipeLines in order for *SuperJAM!* to play. Each Tool outputs its respective part. For example, place the Bass Tool in your bass track. As *SuperJAM!* plays, the Bass Tool plays the bass notes directly into the PipeLine.

★ TIP ★ Remember, place these Tools in the Input PipeLines, if you want B&P Pro to record the composed music directly into the Sequence. On the other hand, you may prefer to have *SuperJAM!* play "live" each time, in which case place the Tools in the Output PipeLines.

The remaining Tool, the *SuperJAM!* Tool, provides the MIDI input to *SuperJAM!*. Every note that enters this Tool is passed on to the *SuperJAM!* Keyboard and other windows, just as MIDI feeds directly into these windows when you run *SuperJAM!* on its own.

If you'd like to use your MIDI keyboard for input to *SuperJAM!*, place this Tool in whichever PipeLine is active with MIDI input. Notes that enter this Tool feed directly into *SuperJAM!*.

Using The Band Window In Bars&Pipes Professional

The *SuperJAM!* Accessory is almost identical to the stand-alone program. The only major difference resides in the Band window. No longer do you select whether to play via MIDI or TurboSound. Instead, since the notes are played directly into the Bars&Pipes Professional PipeLine, the only parameters to set are the MIDI patch number, volume, and octave. As *SuperJAM!* plays, it will send MIDI patch and volume commands down the PipeLine as it enters each new Section.

SUPERJAM! AND MULTI-MEDIA

TurboSound is still available for the Bars&Pipes Professional environment, but as a separate Tool. Also found in the Bars&Pipes Professional drawer, the TurboSound Tool may be loaded into your Bars&Pipes Professional ToolBox and used it to play via the Amiga's internal voices.

Install TurboSound in a Track by dragging the TurboSound Tool icon into that Track, where it replaces the current output tool, usually MIDI Out. Double click on the TurboSound Tool to open the TurboSound window, where you may load, edit, and configure your TurboSound Instruments for your Bars&Pipes Professional composition.

★ TIP ★ #1 Remember that TurboSound eats up memory and processor cycles, so try to use MIDI first, wherever possible.

★ TIP ★ #2 The TurboSound Tool can be very useful for loading and playing long sound effects samples in time with your Bars&Pipes Professional composition.

Using The Song Window In Bars&Pipes Professional

Notice that the *SuperJAM!* Song window is coupled to the Transport Controls window in Bars&Pipes Professional. Pressing the Play, Stop, or Record buttons in either window controls the other. Also note that the Timing menu in the Song window is gone.

Use the Bars&Pipes Professional Timing menu for setting up your synchronization. Instead of a *SuperJAM!* Timing menu, the Song window now has a different menu, the Tempo Map menu, with one option: Set Tempo Map. When this option is selected, *SuperJAM!* automatically replaces the Bars&Pipes Professional tempo map with its own tempo map, created by chaining together the tempos of each Section.

If you'd like to use the Bars&Pipes Professional Tempo Map window to create sophisticated tempo changes, disable this option.

NOTE → Until Bars&Pipes Professional version 1.1 is available, the Set Tempo Map option will be permanently turned off. Bars&Pipes Professional version 1.1 is slated for release sometime after SuperJAM! version 1.0. The Keyboard window cannot control the overall tempo; however, you can still change the tempo from the Transport Controls window.

Loading And Saving In Bars&Pipes Professional

You may still use the New, Load, and Save options from the Quick Strip and Song window menus to load and save your *SuperJAM!* composition. However, if you select Load or Save from Bars&Pipes Professional's Song menu, it will load or save your *SuperJAM!* composition as part of the entire Bars&Pipes Professional Song.

NOTE → Remember, because both Bars&Pipes Professional and SuperJAM! require at least one megabyte of memory in order to run, you'll need at least two megabytes of memory to run the two together.

RECOMMENDED READING

SuperJAM! touches many different areas of modern musical composition and production: music theory, MIDI, arranging and composition, computers... The more knowledgeable you are in all of these fields, the better able you'll be to use *SuperJAM!* Because this manual would be the size of Mount Rushmore, were we to include instruction in all of these areas, we present to you our recommended list of reading:

Music Theory

- Basic Materials in Music Theory, by Paul O. Harder. Allyn and Bacon, Inc.
- Harmonic Materials in Tonal Music - Parts One and Two, by Paul O. Harder. Allyn and Bacon, Inc.
- Harmony, by Walter Piston. W.W. Norton and Company, Inc.
- Pocket Manual of Musical Terms, by Theodore Baker. Schirmer Books or Macmillan Publishing Company, Inc.
- The Harvard Dictionary of Music, by Willi Apel. The Belknap Press of Harvard University Press.

Midi

- MIDI for Musicians, by Craig Anderton. Amsco Publishing of Music Sales Corporation.
- Using MIDI, by Helen Casabona and David Frederick. Alfred Publishing.
- The Electronic Musician's Dictionary, by Craig Anderton. Music Sales Corporation.

Arranging / Composition

- Jazz Arranging and Composing, by Bill Dobbins. Advanced Music.

RECOMMENDED READING

- Music Notation: A Manual of Modern Practice, by Gardner Read. Taplinger Publishing Company.
- Sounds and Scores, by Henry Mancini. Cherry Lane Music.
- The Contemporary Arranger, by Don Sebesky. Alfred Publishing, Inc.
- The Professional Arranger Composer, Parts I and II, by Russell Garcia. Criterion Music Corporation.

Computers

- Amiga for Beginners . Abacus Software.
- Amiga Tips and Tricks. Abacus Software.
- Beginner's Guide to the Amiga, by Dan McNeil. Compute! Books.
- The Amiga Companion, by Rob Peck. IDG Communications/Peterborough.
- The Amiga User's Guide to Graphics, Sound and Telecommunications, by David Myers with programs by Joel Powers. Bantam Computer Books.

GLOSSARY

- 8VA - one octave higher.
- 8VB - one octave lower.
- ACCELERANDO - to increase in speed.
- ACCENT - an emphasis given to a note.
- ACCIDENTAL - any chromatic sign note found in the key signature.
- ADAGIO - slow.
- AEOLIAN MODE - the basic scale beginning on the note A; a mode beginning on the sixth degree of the major scale.
- AFTER-TOUCH - a MIDI event which conveys how hard a key has been pressed after the initial strike.
- ALGORITHMIC COMPOSITION - computer-based improvisation within performer-defined parameters.
- ALLEGRETTO - slower than allegro.
- ALLEGRO - fast.
- ANDANTE - moderately slow.
- ARTICULATION - the punctuation given to a note; for example, whether it will be played short or long.
- A TEMPO - revert to the original tempo.
- AUGMENTED - one half-step higher in pitch
- BASIC NOTE - notes which are unaffected by accidentals.
- BASIC SCALE - the alphabetical succession of notes extending one octave in length and beginning with the letter A. (ABCDEFGA).
- BASS CLEF - placed on the left side of the staff to establish the location of the note "F" on the fourth line; often called the "F clef."
- BEAT - the simplest manifestation of rhythm in traditional music; indicates the pulse of the music.
- CHORD - three or more tones sounding together.
- CHROMATIC HALF-STEP - a half-step which uses only one basic note, for example, F and F#.
- CHROMATIC SCALE - a succession of chromatic half-steps one octave in length; all the sounds contained in one octave.
- CHURCH MODE - the octave scales employed in medieval church music.
- CLOCK - in electronic terms, that which keeps time by the emission of pulses and serves to synchronize.
- COMMON TIME - the 4/4 time signature.
- COMPOUND TIME - time in which the beat is divisible by three.
- CONTROL CHANGE - a MIDI Event which reflects the value of continuous controllers.
- COUNTERPOINT - music consisting of two or more lines that sound simultaneously.

GLOSSARY

- **CRESCENDO** - a gradual increase in volume.
- **DECRESCENDO** - a gradual decrease in volume.
- **DEFAULT** - a pre-existing parameter value.
- **DEGREE** - one of eight consecutive tones in a major and minor diatonic scale. Degrees are counted upward from the keynote.
- **DIATONIC** - by, through, with, within, or embracing the tones of the standard major or minor scale.
- **DIATONIC HALF-STEP** - a half-step using two basic notes, for example, F# and G.
- **DIMINISHED** - an interval that is one half-step lower in pitch than its basic form.
- **DIMINUENDO** - see "decrescendo."
- **DORIAN MODE** - a church mode which corresponds to the scale from D to D played on the white keys of the piano; the basic scale starting on the note D.
- **DOT** - increases the note value by one-half.
- **DOTTED HALF-NOTE** - a note containing three quarter notes.
- **DOUBLE-TIME** - an instance where the beat resolution halves, resulting in a beat that feels twice as fast.
- **DYNAMICS** - the varying and contrasting degrees of intensity or loudness in musical tones; traditionally ranging from fortissimo to pianissimo.
- **EDIT** - to alter pre-existing data.
- **ENHARMONIC** - when two or more notes represent the same pitch, for example, C# and Db.
- **FLAT** - denoted by a "b;" that which lowers a basic note by a half-step.
- **FORTE** - (f) loud.
- **FORTISSIMO** - (ff) very loud.
- **FORTISSISSIMO** - (fff) very, very loud.
- **GLISSANDO** - a rapid scale effect between two notes.
- **GYPSY SCALE** - a scale with two augmented seconds, probably of Indian origin.
- **HALF-NOTE** - a note one half the value of a whole note and represented in traditional music by a white circle with a stem.
- **HALF-STEP** - the smallest interval in the tonal system used in most Western music; two half-steps combine to make a whole-step.
- **HALF-TIME** - a rhythmic feel where the tempo remains the same, but the accent of the beat changes to double the resolution.
- **HARMONIC CHORD INVERSION** - when the lowest note of a chord, the root, is in an upper position instead of being the bass.

GLOSSARY

- **HARMONIC MINOR SCALE** - a minor scale with the raised seventh degree providing a leading tone.
- **HARMONY** - the chordal structure of a musical composition; several voices sounding simultaneously within the key.
- **INTERVAL** - the difference in pitch between two tones; the successive or simultaneous sounding of two tones.
- **IONIAN MODE** - a church ecclesiastical mode which corresponds to a major scale.
- **KEY** - the predominance of the keynote over the remaining tones in a scale; tonality.
- **KEYNOTE** - the first note of a scale.
- **KEY SIGNATURE** - an arrangement of sharps and flats placed on the left of a staff to denote a specific key and scale.
- **LARGO** - extremely slow.
- **LEADING TONE** - the seventh degree of the major and harmonic minor scales.
- **LEGATO** - a note duration equal to its full value with no perceptible space between each note; signified with an arched line above a series of notes.
- **LEggerio** - a note duration of usually $\frac{3}{4}$ its full note value; signified by a horizontal line above the note.
- **LOCRIAN MODE** - a church mode based on the seventh degree of the major scale.
- **LYDIAN MODE** - a church mode based on the fourth degree of the major scale.
- **LYRICS** - the words which accompany music.
- **MAJOR SCALE** - a scale that conforms to the following stepwise pattern: whole, whole, half, whole, whole, whole, half; same as the Ionian mode; considered as a whole, consists of whole-steps except for half-steps between the 3rd and 4th, and the 7th and 8th degrees; all the white notes on the piano from C to C.
- **MEASURES** - divisions of music containing the full value of the current time signature.
- **MELODIC MINOR SCALE** - a minor scale which eliminates the interval of an augmented second between the sixth and seventh degrees of the harmonic minor scale, thereby providing a smoother melodic progression. When ascending, the sixth and seventh degrees are raised; when descending, these notes are unaltered.
- **METER** - various patterns of rhythmic stress within a measure.
- **METRNome** - a device which emits a constant beat and can be set to reflect a specific tempo setting.
- **MEZZO FORTE** - (mf) medium loud.
- **MEZZO PIANO** - (mp) medium soft.
- **MIDI** - abbreviation for musical instrument digital interface; a means of allowing electronic instruments to communicate between themselves.

GLOSSARY

- **MIDI CABLES** - cords which transmit MIDI data to and from other MIDI instruments.
- **MIDI TIME CODE** - a system that designates real-time location by transmitting quarter-frame messages at 120 per second.
- **MIXOLYDIAN MODE** - the mode corresponding to the progression from G to G on the white keys of the piano.
- **MODE** - the formation of a series of notes one octave in length based on each degree of the basic scale; or a condition which determines how something may function.
- **MODERATO** - at a moderate pace.
- **MODULATE** - to shift from one scale or mode to another; often used to "freshen" a motif during recapitulation.
- **MONO AFTER-TOUCH** - a MIDI Event which describes how hard a key is pressed.
- **NATURAL** - cancels a previous accidental, resulting in a basic note.
- **NATURAL MINOR** - a minor scale without chromatic alterations, therefore lacking the leading tone; the Aeolian mode or the basic scale starting on the note A.
- **NOTE** - a symbol used to represent tones; in classical terms, notes indicate pitch as well as relative duration.
- **NOTE OFF** - a MIDI Event which describes when a note ceases to play.
- **NOTE ON** - a MIDI Event which describes when a note is played.
- **OCTAVE** - results when the frequency of a pitch is either doubled or halved; the distance between eight consecutive notes in a major or minor scale.
- **PARAMETER** - a variable.
- **PATCH** - that which designates or defines a synthesized sound; also referred to as a program or voice.
- **PERFECT INTERVAL** - an interval that is not diminished or augmented.
- **PHRASING** - a means of shaping the linearity of your music.
- **PHRYGIAN MODE** - the basic scale starting on the note.
- **PIANISSIMO** - (pp) very soft.
- **PIANISSISSIMO** - (ppp) very, very soft.
- **PIANO** - (p) soft.
- **PITCH** - determined by the frequency of vibration.
- **PITCH BEND** - an action, usually manual, that raises and lowers the pitch of a sound.
- **POLY AFTER-TOUCH** - a MIDI Event which transmits key pressure on an individual key basis.
- **PORTATO** - a note duration of one-half its full length value; signified by the absence of a marking above a note.
- **PRESTISSIMO** - extremely fast.
- **PRESTO** - very fast.

GLOSSARY

- **PROGRAM CHANGE** - a MIDI event which instructs your MIDI device to change patches.
- **QUANTIZATION** - a means of conforming input notes to a specific beat or beat fraction.
- **QUARTER-NOTE** - denoted by a black circle and a stem; represents one-fourth of a whole note.
- **RALLENTANDO** - to gradually slow the tempo; similar terms are *ritardando* and *decellerando*.
- **REAL-TIME** - the time in hours, minutes and seconds.
- **REST** - a symbol that represents periods of silence; a rest sign corresponds to each of the basic note values.
- **RHYTHM** - the motion of the music; the organization of beats of various lengths.
- **RITENUTO** - the immediate reduction of speed.
- **ROOT** - the lowest tone of a chord; the generating tone of the triad, which exerts a strong influence over the other two members.
- **SCALE** - the tones contained in one octave arranged in a stepwise ascent.
- **SEQUENCER** - a computer-based device that accepts as input the data transmitted by any MIDI controller; once inside the machine, the data can be altered, played back and stored in some permanent form.
- **SFORZANDO** - (*sfz*) a mechanism by which a note is heavily accented, then sustains a volume above that of the previous note.
- **SFORZANDO CRESCENDO** - a mechanism by which a note is heavily accented, drops in volume, then gradually increases that volume; typically used during chords of long duration.
- **SFORZANDO PIANO** - (*sfzp*) a mechanism by which a note is heavily accented, then drops in volume.
- **SHARP** - denoted by a #; raises the pitch of a basic note by a half-step.
- **SIMPLE TIME** - when the beat is divisible by two.
- **SMPTE** - a type of time code, adopted by the Society of Motion Picture and Television Engineers, that indicates location in time and synchronizes playback.
- **SONG POSITION POINTER** - a MIDI message which indicates a location in the sequence by counting the number of MIDI Clocks from the start of the piece.
- **SONG-TIME** - the time in measures, beats and clocks.
- **SOUND** - generated by a vibrating body such as a string, column of air or metal plate.
- **SOUND WAVES** - transmitted through the atmosphere as alternate compressions and rarefactions, which are received by the ear and produce in the listener the sensation of sound.

GLOSSARY

- **STACCATO** - a duration of usually $\frac{1}{4}$ its full note value; signaled by a dot placed above a note.
- **STAFF** - traditionally used to notate the property of sound, consisting of parallel horizontal lines with intervening spaces used to indicate the pitch of tones.
- **STEP-ENTRY** - a means of recording music one note at a time.
- **STRONG BEATS** - in a measure, beats that are stressed more strongly.
- **SUBDIVISION** - dividing the beat into smaller parts.
- **SYNCHRONIZATION** - a process in which instruments, recording, and/or visual images play in tandem, and whose playback rate is controlled from a common time code.
- **SYNCOPATION** - placing the rhythmic emphasis on the upbeat of the music.
- **SYNTHESIZER** - an electronic device designed to reproduce and manipulate sounds.
- **TEMPO** - the speed at which the music is played.
- **TIMBRE** - the quality of the sound.
- **TIME SIGNATURE** - that which appears at the beginning of a piece as two numbers, one above the other; the lower indicating the type of note to be used to measure each beat, the upper, the number of such beats per measure.
- **TONE** - a sound of definite pitch and vibration.
- **TRANSPOSE** - to shift a note or configuration of notes by a specified interval within the key.
- **TREBLE CLEF** - placed on the left side of the staff to establish the location of the note "G" on the second line; often called the "G Clef."
- **TRIAD** - three tones sounded simultaneously.
- **TRIPLET** - three even beats which occur where normally only two do.
- **UPBEAT** - the second half of a beat; emphasized in syncopation.
- **VELOCITY** - the force with which a key is pressed; indicated by numerical value between 0 - 127.
- **VOLUME** - aural intensity.
- **WEAK BEATS** - in a measure, beats that aren't stressed as strongly as others.
-
- **WHOLE-NOTE** - in its most commonly accepted definition, a note containing four beats.
- **WHOLE-STEP** - two half-steps.

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